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RAC-R-141
APRIL 1972

AD 742250

Integrated Manpower Programming Phase I Study (IMP-I) General Approach and Methodological Concept

by Duane S. Cason
Thomas R. Cross

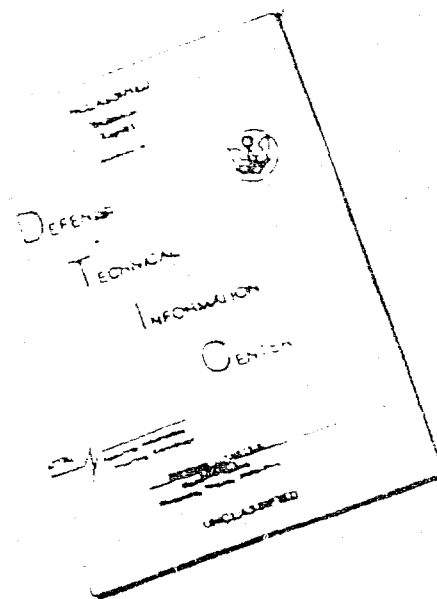
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Security Classification

DOCUMENT CONTROL DATA - R&D		
(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)		
1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION
Research Analysis Corporation McLean, Virginia 22101		Unclassified
		2b. GROUP
3. REPORT TITLE		
Integrated Manpower Programming Phase I Study (IMP-I) General Approach and Methodological Concept		
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)		
Final Report		
5. AUTHOR(S) (First name, middle initial, last name)		
Duane S. Cason Thomas R. Cross		
6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF PAGES
April 1972	208	38
8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)	
DAHC19-69-C-0017	RAC-R-141	
b. PROJECT NO.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
011.110		
c.		
d.		
10. DISTRIBUTION STATEMENT		
Approved for public release; distribution unlimited.		
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY
		Office of the Assistant Chief of Staff for Force Development Department of the Army
13. ABSTRACT		
<p>This report describes in detail the process by which authorizations for future military and civilian manpower are developed in the Department of the Army during the annual Department of Defense Planning, Programming, and Budgeting System cycle. Authorizations for the two types of manpower are developed from differing bases and by differing bases and by differing procedures. To satisfy higher-level management controls and fiscal constraints, total manpower allocations are developed and evaluated simultaneously in four classification systems. As a result, manpower planning is fragmented, tradeoffs between civilian and military manpower are obscured, the rationale for determining manpower authorizations is difficult to explain and defend, and arbitrary adjustments to Army manpower programs are made by the Department of Defense, the Office of Management and Budget of the Executive Office, and the Congress.</p> <p>On the assumption that external controls and constraints on Army manpower programming remain unchanged, the study proposes that civilian and military manpower allocations be developed through a unified system throughout the planning cycle. Civilian manpower allocations should be tied strictly to units of the Army force structure as is done with military manpower allocations, all manpower programming should be developed from a common data base, the planning process—especially in the case of civilian manpower allocations—should be more highly automated, the Land Forces Classification System should become the keystone of the entire planning and programming system, and translations between and among all four classification systems should become an integral part of the automated system.</p>		

DD FORM 1473

NOV 68

UNCLASSIFIED

Security Classification

(RAC)

UNCLASSIFIED

Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Army Force Development Plan						
Army Management System (Fiscal Code)						
Army Strategic Objectives Plan						
Automatic Data Processing						
Five Year Defense Program						
Force Accounting System						
Land Forces Classification System						
Manpower planning						
Planning, Programming, and Budgeting System						
Program Objective Memorandum						

UNCLASSIFIED

Security Classification

RAC

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Area Code 703
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FOREWORD

This report summarizes the results of the first phase of a two-phase study of the programming of Army military and civilian manpower within Headquarters, Department of the Army (HQ DA), and the Office of the Assistant Chief of Staff for Force Development (OACSFOR). The report provides the background and factors currently influencing military and civilian manpower programming and a concept for an integrated manpower programming system.

The main goal of the IMP-I study is to develop a general approach for integrated programming within the annual planning cycle in HQ DA. This approach and concept, if implemented as an operating system, could overcome problems with current military and civilian manpower programming. Additional benefits would be in increased efficiency of OACSFOR manpower programming activities, improved control of military and civilian manpower data from existing automated data systems, and better response to the data needs within OACSFOR and higher echelons of Army management. In highlighting problems, the report provides a basis for management evaluation and action by the study sponsor or other HQ DA agencies.

Albert D. Tholen
Head, Resource Analysis Department

ACKNOWLEDGMENTS

Numerous individuals of the Office of the Assistant Chief of Staff for Force Development (OACSFOR) and other Department of the Army staff agencies and offices contributed their time, interest, and professional knowledge during the development of this study. The assistance and cooperation provided by BG F. J. Kroesen, Jr., Director, Manpower and Forces Directorate (MFD), OACSFOR, Mr. E. W. Kahn, Deputy Director, MFD (Manpower), and other key military and civilian personnel of MFD were most helpful.

Particular acknowledgment is made of the guidance and advice provided by COL J. R. Brinkerhoff, Chief, Program Development Division (PDD), MFD, and Study Advisory Group (SAG) Chairman. Assistance provided by other members of PDD was especially noteworthy. These included Mr. George Sorkin, Deputy Chief; LTC J. E. Blanck, SAG Secretary; and the PDD branch chiefs, LTCs C. L. McNeill, A. S. Rydel, Jr., and D. L. Wilson.

Information and advice on the Force Development Management Information System and Force Accounting System provided by COL L. F. Dixon, ACSFOR Information and Data Systems Officer, and LTC R. G. Arnheim and MAJ A. R. DuPont, Force Accounting Division, MFD, were of particular value to the study effort.

At RAC, the suggestions and advice of BG P. D. Phillips (USA Ret) and members of the RAC Review Board—Dr. C. A. H. Thomson, Messrs. J. C. Whiton and D. A. Downing—were beneficial in the preparation of this report. Secretarial assistance in the typing of extensive background materials during the progress of the study and in the preparation of this report was ably and efficiently provided by Mrs. Elizabeth Ficklin and Mrs. Anna Pettinato.

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SUMMARY

PROBLEM

To determine the most efficient method for the integrated programming of military and civilian manpower authorizations.

FACTS

Military and civilian manpower authorizations are determined by different systems under separate agencies in the Office of the Secretary of Defense (OSD). No method currently exists for the integrated programming of military and civilian manpower. The rationale for determining manpower authorizations is difficult to explain and defend. As a result, arbitrary adjustments to Army manpower programs are made by OSD, the Office of Management and Budget (OMB) and the Congress. More than half the Army budget is spent for personnel.

DISCUSSION

Integrated Manpower Programming (IMP) is a two-phase study to develop a systematic method for determining Army manpower authorizations and for achieving an efficient means of integrating the programming of military and civilian manpower authorizations. The Phase I study (IMP-I) analyzed existing systems for determining military and civilian manpower authorizations, and developed an approach for integrating the programming of military and civilian manpower authorizations. Phase II (IMP-II) will determine in detail the methods to be used for integrating the programming of Army military and civilian manpower, and develop display formats and rationale for explaining and defending military and civilian manpower

authorizations. Recommendations for changes in OSD management control to permit more efficient manpower programming will be considered.

This report addresses the IMP-I phase and provides the basis for IMP-II.

The development of Army manpower authorizations for the annual Department of Defense (DOD) Planning, Programming, and Budgeting System (PPBS) cycle is a highly complex, constrained, and fragmented process within the Department of the Army (DA). The current approach to military and civilian manpower programming is predicated on differing bases and procedures within this cycle. The requirement to develop and evaluate Army military and civilian manpower in several different program classification systems, imposed for purposes of higher management controls and fiscal constraints, is a major factor hindering efficient manpower programming. The present multiple program classification systems confuse the military and civilian space-cost mix analyses within the Army. This condition also results in a lag between force and military manpower programming and civilian manpower programming, which makes DA evaluation of military and civilian manpower allocations and tradeoffs difficult.

The IMP-I approach is based on the premise that civilian manpower is an integral element of the Army force structure and the programmed units of which it is composed. Further, civilian manpower authorizations would be developed in force structure classifications and unit-derived terms comparable with military manpower in DA planning activities. Use of an integrated force and manpower data base and data structure would permit force-structure-derived military and civilian manpower data to be translated to the other program classification systems on a consistent basis. The utility of the Land Force Classification System (LFCS) as the Army vehicle for integrating manpower programming is examined, with the support of the Army Force Accounting System (FAS), as the standard programming data base. The approach is oriented toward generating output data and information for the display and evaluation of integrated military and civilian authorizations in levels of aggregation appropriate for DA management, staff, and programming activities. It stresses improved interfaces between the programming staff and

supporting data systems, intensive control of manpower data, and the use of computer-supported analytical techniques for manpower programming activities.

CONCLUSIONS

1. The Land Forces Classification System (LFCS) provides a meaningful basis for the integrated development and programming of military and civilian manpower authorizations within the DA. It can provide consistent and comparable visibility of the military and civilian manpower of the units that make up the Army.

2. Effective and valid manpower programming requires, first, the use of a single integrated and unit-oriented data system and, second, intensive programming staff management and control of, and proponent responsibility for, military and civilian manpower data and information inputs and outputs.

3. Manpower planning and programming activities and the data system must interact to produce related aggregated program information for use by higher echelons of the DA throughout the PPBS cycle in all required DOD program classifications, using the LFCS as the central point of reference.

4. The translation of military and civilian manpower program authorizations into budget detail will continue to require differing outputs, owing to the diverse ways military and civilian manpower are funded in the appropriations and budget structures. However, integrated program development—begun early in the PPBS cycle—and consistent operations on a continuously updated force and manpower program data base will permit greater responsiveness through use of automation to produce budget program detail.

5. The FAS data system, together with existing but rudimentary analytical tools and methods available, can provide a usable basis for development of a force-structure-oriented computer-supported integrated manpower programming system. The technical development of an integrated system capability is feasible and attainable by computer system analysis methods and analytical model design techniques.

Internal review and adjustment of DA programming organizational activities and military and civilian manpower policies will be required for system implementation.

ABBREVIATIONS

ACSC-E	Assistant Chief of Staff for Communications-Electronics
ACSFOR	Assistant Chief of Staff for Force Development
ACSI	Assistant Chief of Staff for Intelligence
ADAB(O)	Assistant Director of the Army Budget (Operations), Comptroller of the Army
ADP	automatic data processing
AFDP	Army Force Development Plan
AFP	Army Force Program
ALO	authorized level of organization
AMS	Army Management Structure (Fiscal Code)
AMSC	Army Management Structure Code
A/P	Appropriation and Program (Budget)
AR	Army regulation
ARMS	Army-wide Requirements Model for Support Manpower
ASA (FM)	Assistant Secretary of the Army (Financial Management)
ASA (M&RA)	Assistant Secretary of the Army (Manpower and Reserve Affairs)
ASD (C)	Assistant Secretary of Defense (Comptroller)
ASD (SA)	Assistant Secretary of Defense (Systems Analysis)
ASOP	Army Strategic Objectives Plan
AVCSA	Assistant Vice Chief of Staff, US Army
BOIPS	Basis of Issue Planning System
BRC	Budget Review Committee
BY	budget year
CAGR	aggregation of civilian totals
CAR	Chief, Army Reserves
CER	cost estimating relations

CFY	current fiscal year
CMD	Command Code
CNGB	Chief, National Guard Bureau
COA	Comptroller of the Army
CORC	Chief, Office of Reserve Components
CRA	Command Requirements and Allocation Division, MFD
CRD	Chief of Research and Development
CSA	Chief of Staff, US Army
CSM	Chief of Staff Memorandum
CSR	Chief of Staff Regulation
DA	Department of the Army
DASD (R&LFA)	Deputy Assistant Secretary of Defense (Regional and Land Forces Analysis)
DCSLOG	Deputy Chief of Staff for Logistics
DCSOPS	Deputy Chief of Staff for Military Operations
DCSPER	Deputy Chief of Staff for Personnel
DOD	Department of Defense
DODI	Department of Defense Instruction
DPPA	Director, Program and Planning Analysis
EDATE	effective date
FACTS	Force Accounting Terminal System
FAS	Force Accounting System
FDMIS	Force Development Management Information System
FDP	Force Development Plan
FDPD	Force Development Plans Division
FDP-FS	Force Structure Branch, FDPD
FGC	Fiscal Guidance Category
FGM	Fiscal Guidance Memorandum
FINCISCOM	Finance and Comptroller Information Systems Command
FM	Financial Management
FORFA	FAS Force Files
FOR IDSO	ACSFOR Information and Data Systems Office
FPLAN	Force Plan Code (LFCS)
FY	fiscal year
FYDP	Five Year Defense Program
HQ DA	Headquarters, Department of the Army

IDSO	Information Data Systems Office
I&L	Installations and Logistics
IMP	Integrated Manpower Programming
ISI	initial support increment
JCS	Joint Chiefs of Staff
JFM	Joint Forces Memorandum
JROD	Joint Research and Development Objectives Document
JSOP	Joint Strategic Objectives Plan
LFCs	Land Forces Classification System
MACRIT	Manpower Authorization criteria
MAGR	aggregation of military totals
MANEX	Manpower Annex Data (file of FAS System)
MCA	military construction, Army
MCANG	military construction, Army National Guard
MCAR	military construction, Army Reserves
MFD	Manpower and Forces Directorate, OACSFOR
MF-FA	Force Accounting Division, MFD
MF-US	Utilization and Standards Division, MFD
MPA	military personnel, Army
M&RA	Manpower and Reserve Affairs
MV	manpower voucher
NGPA	National Guard personnel, Army
OACSFOR	Office of the Assistant Chief of Staff for Force Development
OASA (M&RA)	Office of the Assistant Secretary of the Army (Manpower and Reserve Affairs)
OASD (SA)	Office of the Assistant Secretary of Defense (Systems Analysis)
OAVCSA	Office of the Assistant Vice Chief of Staff, Army
OCA	Office of the Comptroller of the Army
OCSA	Office of the Chief of Staff, Army
ODCSPER	Office of the Deputy Chief of Staff for Personnel
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
OMA	operation and maintenance, Army
OMANG	operation and maintenance, Army National Guard
OMB	Office of Management and Budget, Executive Office

ORC	Office of Reserve Components
OSD	Office of the Secretary of Defense
OVCSA	Office, Vice Chief of Staff, US Army
PBD	Program Budget Decision
PBG	Program and Budget Guidance
PCD	Program Change Decision
PCR	Program Change Request
PCS	permanent change of station
PDCEP	Civilian Programs Branch, PDD
PDD	Program Development Division, MFD
PDM	Program Decision Memorandum
PDMP	Military Programs Branch, PDD
PDTP	Troop Programs Branch, PDD
PE	program element (FYDP or AMS code)
PEMA	procurement of equipment and missiles, Army
PERSINSCOM	Personnel Information Systems Command
PGRC	Program Guidance Review Committee
POM	Program Objective Memorandum
PPBS	Planning, Programming, and Budgeting System
PS	Program and Subprogram (Budget)
R&D	Research and Development
RDTE	Research, Development, Test, and Evaluation
RPA	Reserve personnel, Army
SA	Secretary of the Army
SACS	Structure and Composition System
SAG	Study Advisory Group
SAMVA	Special Assistant for the Modern Volunteer Army
SELCOM	Select Committee
SGM	Strategic Guidance Memorandum
SSI	sustaining support increment
TAADS	The Army Authorization Documents System
TAB	Troop Actions Book, AFP
TAG	The Adjutant General
TDA	tables of distribution and allowances

TFGM	Tentative Fiscal Guidance Memorandum
THISA	Transaction History File
TOA	total obligational authority
TOEMTB	Table of Organization and Equipment Mobilization Troop Basis
TOE/TDA	Tables of Organization and Equipment/Tables of Distribution and Allowances
TSG	The Surgeon General
TTPS	transients, trainees, patients, students
UIC	unit identification code
UNMBER	unit number
UNPEC	unit program element code
USAMSSA	US Army Management Systems Support Agency

INTEGRATED MANPOWER
PROGRAMMING
PHASE I STUDY (IMP-I)

General Approach
and Methodological Concept

Chapter 1

INTRODUCTION

THE PROBLEM

The IMP study was generated by the following statement of the problem by the study sponsor:

Military and civilian manpower authorizations are determined by different systems under the aegis of separate agencies in the Office of the Secretary of Defense. There is no method currently available for the integrated programming of military and civilian manpower. The rationale for determining manpower authorizations is difficult to explain and defend; as a result, arbitrary adjustments to Army manpower programs are made by OSD, OMB and the Congress. Since more than half of the Army budget is spent for personnel, an effort should be made to determine the most efficient method for the integrated programming of military and civilian manpower authorizations.¹

The term "authorizations," in the sense in which it is used in the IMP study, refers to program authorizations for future manpower for which the Army seeks approval in terms of spaces and funds in the annual Army program development-budget formulation cycle with the Department of Defense (DOD) and the Congress. This term is used rather than "requirements" since it was established during formulation of the study problem that requirements relate to broad, relatively unconstrained strategic objective planning. Programming, on the other hand, is the transitional process that finitely adjusts planning requirements to fit fiscal, resource, and policy constraints. Thus programmed authorizations become a premise for Army budget development and, when approved and funded, provide the authorization basis for the current Army.

OBJECTIVES AND TASKS

Overall IMP Objective

IMP was conceived as a two-phase study to be guided by the following overall objective:

"To develop a systematic method for determining Army manpower authorizations and for achieving an efficient means of integrating the programming of military and civilian manpower authorizations."¹

Time-Phased Objectives

The overall objective above breaks down into the subordinate objectives for the two study phases of IMP, below:

Phase I - Will analyze systems currently in use for determining military and civilian manpower authorizations, and determine a general approach for integrating the programming of military and civilian manpower authorizations, assuming no change in OSD management or controls.

If the results of Phase I are promising:

Phase II - Will then determine in detail the methods to be used for integrating the programming of Army military and civilian manpower, and develop appropriate display formats and rationale for explaining and defending military and civilian manpower authorizations. Recommendations for appropriate changes in OSD management control, to permit optimum integrated manpower programming, will be considered.¹

This report covers the RAC study effort addressed to the Phase I objective (IMP-I) during the period 1 Sep 70-31 Aug 71, based on the following tasks:

IMP-I Study Tasks

Four study tasks were assigned for the accomplishment of the IMP-I objective. These tasks are summarized as follows:

- (a) Define the controls and constraints influencing manpower programming.
- (b) Determine how current military and civilian manpower programming systems are working.
- (c) Compare and analyze the military and civilian manpower programming systems.
- (d) Devise a general methodology for overcoming system deficiencies and integrating military and civilian manpower programs.

APPROACH AND METHODOLOGY

Background

The Planning, Programming, and Budgeting System (PPBS) process—within which the development of Army manpower authorizations programs is accomplished—is a complicated, cyclic interaction of systems, data structures, organizations, and channels of communication both between and within DOD and the Department of the Army (DA). This complexity is further compounded by the various concurrent or overlapping PPBS activities in progress at any time at all levels of the DOD-DA organizational hierarchies. Each of these activities has a dependent relation to the other, but with different objectives, time bounds, and organizational consequences. Additionally, the DOD-prescribed PPBS procedures in effect at the time the IMP-I study was initiated represented some major departures from those previously applicable. Therefore from the outset a principal research effort involved the acquisition of detailed information bearing on military and civilian manpower programming. This effort was made in order to isolate from the complex pattern those salient aspects which affect the efficient development of Army manpower programs at the level of management and technical activity where programming is performed within the Office of the Assistant Chief of Staff for Force Development (OACSFOR), and specifically the OACSFOR Manpower and Forces Directorate (MFD).

Research Methods

These methods entailed the acquisition and review of a wide range of official literature dealing with policies, methods, and procedures bearing on manpower programming. A complete bibliography is included in App A. This literature search was augmented by an extensive interview program within Headquarters, Department of the Army (HQ DA). The HQ DA staff agencies and offices wherein interviews were conducted are shown in App B. A total of 16 organizational elements was involved, represented by 26 individuals interviewed. These ranged from military and civilian action officers through branch and division chiefs to general officer and senior civilian levels. The goal was to interview the most knowledgeable persons at each level in order to learn as much as possible of that segment of the system with which they were involved.

As shown in App B, interviews were extended beyond OACSFOR, in recognition of the fact that there are other DA agencies whose functions affect or influence manpower programming activities.

In addition to the foregoing, it was necessary to obtain a better understanding of some of the key ACSFOR, Force Development Management Information Systems (FDMIS), relative to their automated data and acquisition and retrieval capabilities. Thus briefings were arranged with the ACSFOR Information Data Systems Office (FOR IDSO) and the US Army Management Systems Support Agency (USAMSSA), the computer facility supporting the FDMIS. Discussions were also held with the ACSFOR FDMIS system managers for unit and manpower authorizations systems. Valuable insights were gained thereby into the volume, scope, and nature of the data available within and processed by the FDMIS, as well as system potentials.

As research and analysis of background information progressed and new avenues of inquiry were uncovered, additional informal discussions were conducted. These were principally with MFD staff action personnel who work with the detailed technical aspects of military and civilian manpower programming or system support. These technical discussions were most useful in evaluation of results of previous analysis and in clarifying important details or problems in current programming system operations.

PURPOSE AND SCOPE

Purpose

This report synthesizes the results of research required by the IMP-I study tasks stated in the preceding section. In response to the IMP-I objective it provides both the background and a conceptual approach as the basis for detailed development of a system for integrated military and civilian manpower programming as contemplated for IMP Phase II (IMP-II). The main goal of the report is to present a technically feasible general approach and methodological concept that, when developed as an operating system, would serve to overcome deficiencies perceived in current system operations. However, in highlighting certain problems it may also provide a basis for internal

management evaluation and action by the study sponsor or other DA agencies, pending development of the detailed system design in the follow-on IMP-II study.

Scope

Chapter 2 summarizes and evaluates the principal factors affecting manpower programming under the DOD-DA management controls, constraints, and procedures in effect for the Army PPBS cycle that commenced in calendar year (1970) for the development of the budget year FY72 Army force, resource, and manpower programs. Further analysis of these controls and constraints is in App C. The operation of the current programming system in the above cycle is summarized through a task analysis and system evaluation in App D.

Chapter 3 presents the proposed general approach for an integrated manpower programming system. The basic premise is that civilian manpower is an integral element of the Army force structure and the units that compose it. Civilian manpower should be presented in comparable force structure terms with military manpower in programming operations and DA management reviews and decision making in all phases of the PPBS cycle, while consistently tracking to the other fiscal and budget program classifications used for DOD and HQ DA management control. The utility of the Land Forces Classification System (LFCS) structure ~~as the integrating link for military and civilian manpower~~ and the role of the ACSFOR FIMIS Force Accounting System (FAS) unit-oriented data base and data element structure are discussed. The applicability of automated modeling techniques and programming factors is indicated to support a logical approach to the development of force-structure-derived military and civilian manpower programs. The role of staff programming activities in the intensive management and control of data as a function of data base viability is emphasized.

Chapter 4 provides an overview of the methodological concept visualized as the basis for an integrated manpower system, based on the general approach in the preceding chapter. The concept is directed toward generating output information to permit the display and evaluation of military and civilian manpower in the DOD-DA program classification structures in appropriate aggregation or detail for management,

staff, or programming activities. The relations of outputs, inputs, and the interfaces with programming and data management procedures and the supporting data system are described, together with a general system logic and representative processing routines. Supporting details are included in App E.

Chapter 5 summarizes major conclusions concerning the advantages requirements, and foreseeable impacts of the IMP-I approach and concept relative to current system operations and the attainment of the overall IMP objective. Recommendations are made for subsequent OACSFOR-RAC actions to be undertaken in the follow-on IMP-II system development study, if funded.

Chapter 6, added after completion of the Phase I study, offers some preliminary observations based on work on Phase II performed prior to the unanticipated termination of the latter effort because of a Congressionally-imposed reduction in RAC funding for Work Year 1972.

Chapter 2

FACTORS AFFECTING MANPOWER PROGRAMMING

GENERAL

The factors affecting military and civilian manpower programming by the Office of the Assistant Chief of Staff for Force Development (OACSFOR) relative to the other functional Army staff agencies and the higher management echelon of Headquarters, Department of the Army (HQ DA), are a complex intermingling of the controls and constraints applied by Department of Defense (DOD) management and their implementation within the DA. These controls and constraints have a direct bearing on Army programming system operations in the annual Planning, Programming, and Budgeting System (PPBS) cycle in that they perpetuate differing approaches to the development of military and civilian manpower authorizations and currently preclude integrated manpower programming. This condition is further affected by the stringent time constraints inherent in the DOD-DA control methods and the highly complex DA organizational environment within which manpower programming is done and DA reviews and decisions on programmed manpower allocations are made. A summary of the principal findings of the IMP-I study relative to the foregoing factors is presented in this chapter as background for the general approach and methodological concept for integrated Army manpower programming developed subsequently in this report.

CONTROLS AND CONSTRAINTS ON ARMY PROGRAM DEVELOPMENT

The controls and constraints on Army programs are of two types applied at two levels: First are those imposed by the DOD as the means of bringing the Army into a system for exercising centralized control over the resource programs and budgets of all the Service departments

and DOD agencies. Next are those resulting from the needs of DA management to obtain the necessary information and responses from Army staff agencies in order that senior DA management officials can evaluate and act on proposed Army manpower and resource programs within the constraints imposed by DOD. A detailed review of the nature and application of these two levels of controls and constraints is contained in App C.

DOD Management Controls and Constraints

The Planning, Programming, and Budgeting System (PPBS). The formal structure of DOD management controls and the channel for the transmission and response to programming and budget constraints is the DOD PPBS.² The PPBS, as implemented during calendar year 1970 for the development and control of the forces, manpower, and resource programs of the Army and Services, for the budget year FY72, included significant policy and procedural changes. These changes stemmed from the Laird-Packard philosophy of "participatory management" and the reinstitution of the practice of allocating specific fiscal ceilings to the Service departments. In a period of rapidly changing international conditions and national defense policies, and intensive legislative review, the controls and constraints exercised through the revised DOD PPBS were increasingly exigent and stringent.

Among the most significant procedural PPBS changes was the DOD requirement for submission of a comprehensive Program Objective Memorandum (POM) by the Services under the constraints imposed by definitive fiscal guidance from the Office of the Secretary of Defense (OSD). This guidance was the means by which OSD allocated the fiscal control ceilings to each Service as well as to specific categories of Service missions, programs, and functions. The evident purpose of these DOD controls was twofold: First, to provide OSD with a range of alternative choices by which a balanced Defense program—as viewed by DOD—could be obtained within a declining share of the Federal budget. Second, and of concurrent importance, the POM would represent a detailed statement by Service departments of the force and resources proposed for the period of the DOD Five-Year Defense Program (FYDP) with emphasis on the budget year (FY72) for which funding authorization would be sought.³ Thus the fiscally constrained Service-developed resource

allocations in their POM programs (i.e., force structure, military and civilian manpower, operating and investment costs), established the major allocation pattern for the Services' FY72 budget development, following OSD review and action of the POMs. In this regard the POM procedure extended DOD management control over Service resources by requiring departmental management to develop, analyze, and justify resource program contents on an omnibus basis well in advance of budget formulation. In conjunction with the constraints inherent in the DOD FYDP, Service department latitude during budget development in making major reallocations (e.g., military manpower vs civilian manpower) following DOD action on the POMs was constrained to a greater degree than under previous PPBS procedures.

Constraints of PPBS Complexity. Within the PPBS, the DOD FYDP is the principal information and data system for recording and controlling current, programmed, and planned Service resource authorizations and related fiscal requirements on a detailed program element basis. In addition to the FYDP program classification structure, however, the Service departments are also required to develop their plans and authorizations programs concurrently in other program classifications. These are:

- Fiscal Guidance Categories (FGC), as contained in the OSD fiscal guidance by which the POM programs constraints are allocated⁴
- Appropriation budget accounts
- Land Forces Classification System (LFCS) for the force structure and military manpower of the Army and Marine Corps.⁵

These various program classifications represent the differing ways by which the offices of the Assistant Secretaries of Defense (System Analysis) (ASD [SA] and (Comptroller) (ASD [C]) exert detailed DOD control during the PPBS cycle. During the planning and subsequent program development (POM) phase of the cycle, the DA must develop and justify its manpower authorizations and allocations in all four classifications (FYDP, FGC, Appropriations, and LFCS) in both summary and detailed form. During subsequent budget formulation the DOD FYDP program structure and appropriations budget accounts—as prescribed by the Army Management Structure (AMS)⁶—prevail. The DOD requirement to

develop programs concurrently in these multiple classification systems; within the PPBS is a significant constraint on efficient Army manpower programming, owing to the disparate ways in which military and civilian manpower are entered and aggregated in these differing classification structures (App C).

DA Management Controls and Constraints

Management Control Requirements. The HQ DA management level comprises the Army Secretariat and Office of the Chief of Staff, Army (CSA) together with their immediate subordinates and supporting staffs (see Figs. 2-2 and 2-2A). This DA management echelon has a pivotal role in translating DOD constraints and OSD guidance in such manner that the functional agencies and operating procedures of the Army staff can respond. Within HQ DA the central management requirement is to adjust planned force structure, military and civilian manpower, and other resource requirements to conform to OSD fiscal allocations. At the same time, DA management seeks to obtain rational and justifiable balance among these programming allocations through frequent management reviews and adjustments during program development. The general approach by which this was attempted for the Army POM FY72-FY76 is illustrated in Fig. 2-1.

Differing Manpower Approaches. In the Army staff requirements planning preceding program development, military and civilian manpower are developed and expressed in different ways. This dissimilarity results from current DA manpower policies⁷ and internal institutional practices. Military manpower requirements are derived principally from the force units planned to constitute the projected Army force structure depicted by the LFCS. Civilian manpower requirements, on the other hand, are planned as a generalized budgetary add-on to the Army and treated principally in the AMS appropriations budget classifications from which civilian employee compensation is funded. These disparate planning bases for military and civilian manpower are carried forward into programming and budgeting phases during the implementation of DA management controls, as discussed in a subsequent section of this chapter. This staff and management is displayed in Figs. 2-2 and 2-2A.

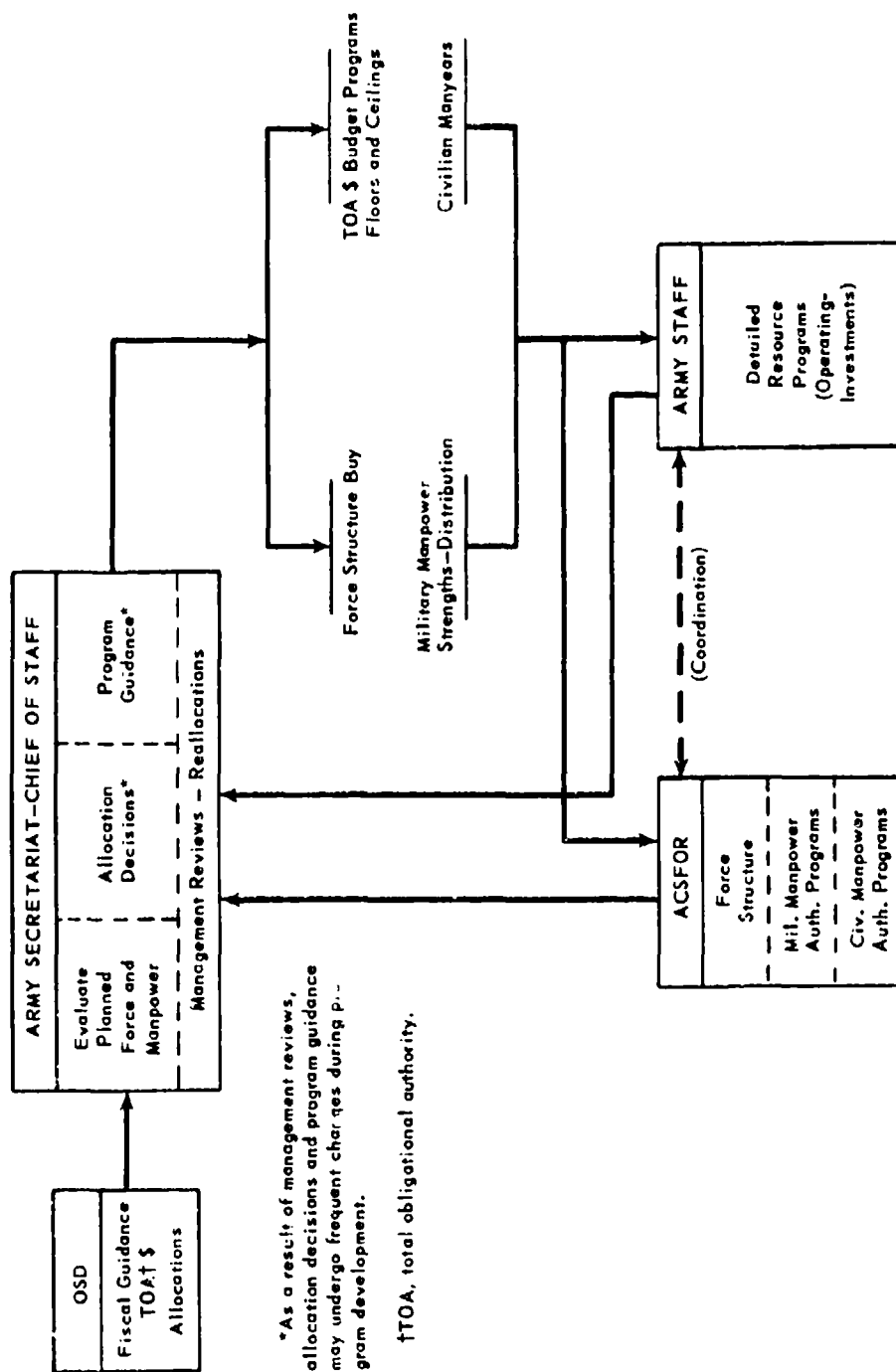


Fig. 2-1—DA Program Controls and Constraints

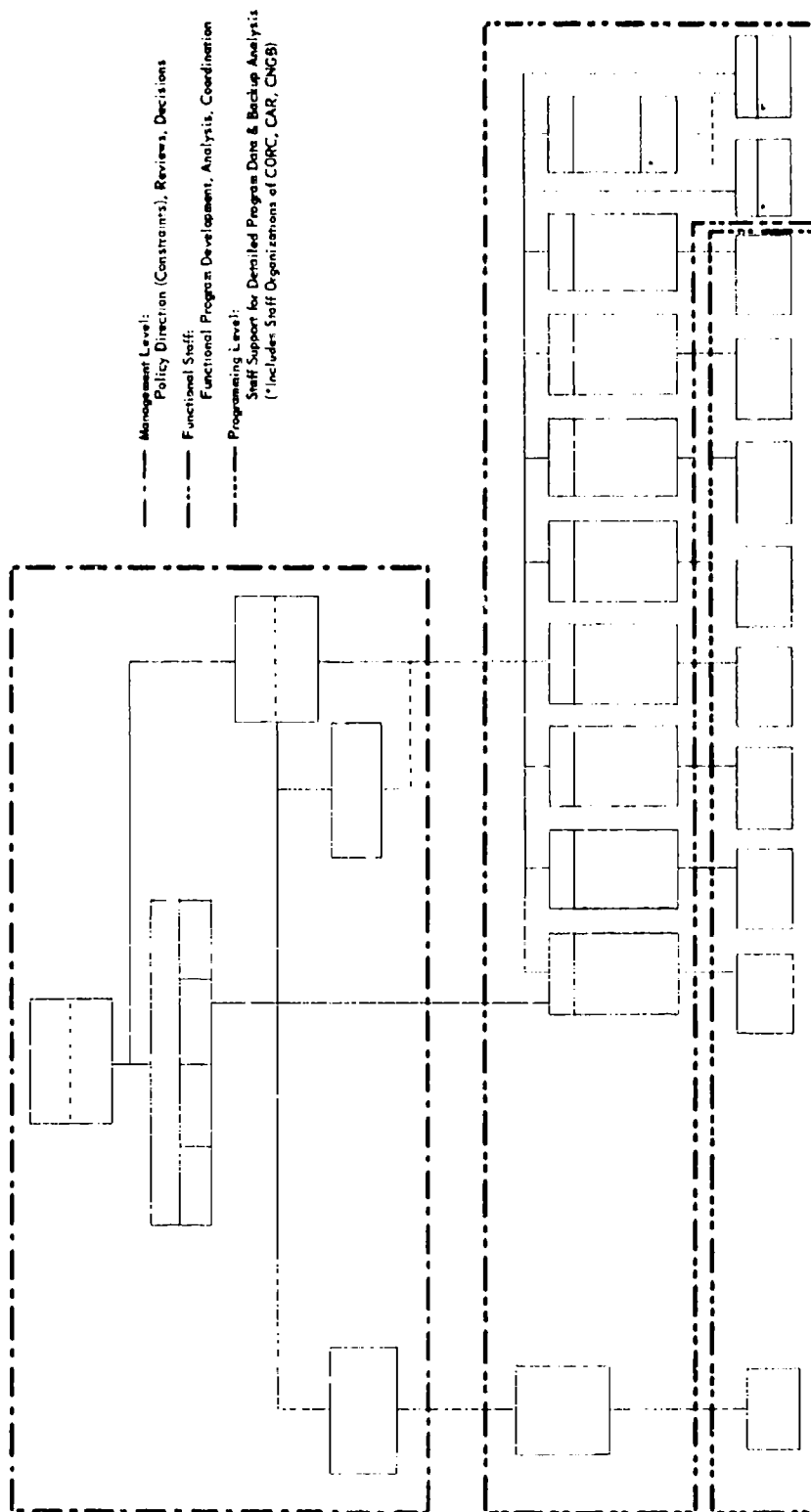


Fig. 2-2A—HQ DA Management, Staff, and Programming Echelons

Implementation of DA Controls and Constraints. An overview of the implementation of DA management controls and constraints on POM program development within HQ DA is depicted in Figs. 2-2B and 2-2C. The Assistant Vice Chief of Staff, Army (AVCSA) is the central point of direction, coordination, and control in the process of the Army staff response to guidance from the Secretariat-GSA level. AVCSA is assisted by the Select Committee (SELCOM) and Program Guidance Review Committee (PGRC) as means of cutting through the complexity and time constraints involved in the intricate program development process. The composition and function of these committees are indicated in Table 2-1.

Figure 2-2C also illustrates the complexities posed by the requirement for concurrent program development in the various program classification structures prescribed (i.e., LFCS, FYDP, FGC, and AMS). The constraints of time resulting from this complexity are further described in App C, as well as the basic control mechanism (The Force Structure Account display) used by the AVCSA-SELCOM-PGRC to guide and review force, manpower, and resource program development by Army staff agencies.

Following submission of the POM programs to OSD, budget formulation is initiated within the DA, with emphasis on the FYDP and AMS appropriations. During the budget formulation activities of the Army staff, the Budget Review Committee (BRC, Table 2-1) supplants the PGRC in the pattern of DA management control in Fig. 2-2C. Under the AVCSA and SELCOM, the BRC acts as the control group with respect to the Army staff agencies for the construction of the AMS budget charts of accounts and detailed resource program backup required for initial and subsequent submission of the Army budget and the corresponding updates of the Army portion of the FYDP.

CURRENT DA PROGRAMMING SYSTEM

General

The current Army programming system within which military and civilian manpower programming activity is performed is depicted and analyzed in App D. This section provides a summary description of the principal phases of system operations within the management controls

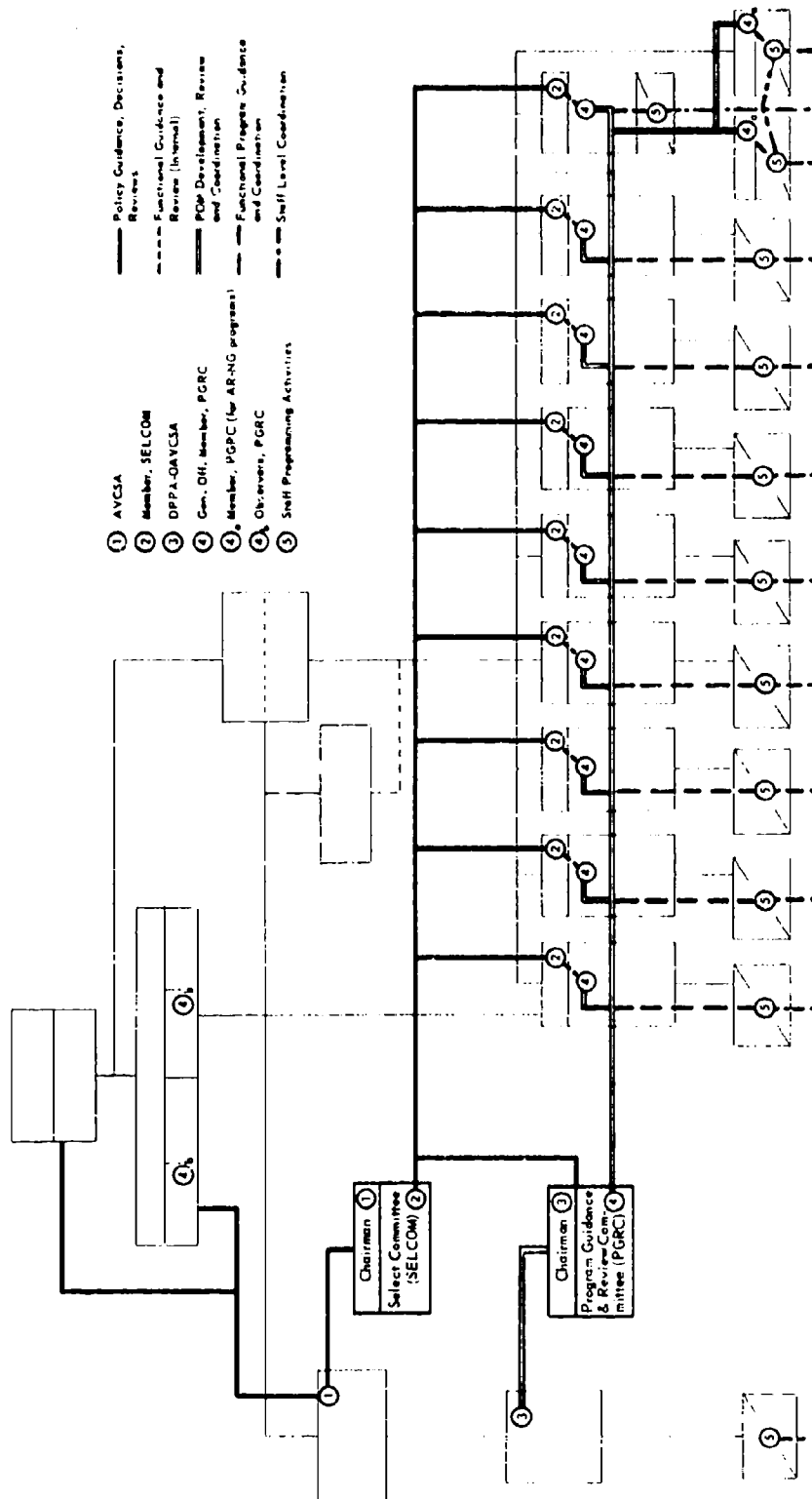


Fig. 2-2B—DA System for Preparation of the POM

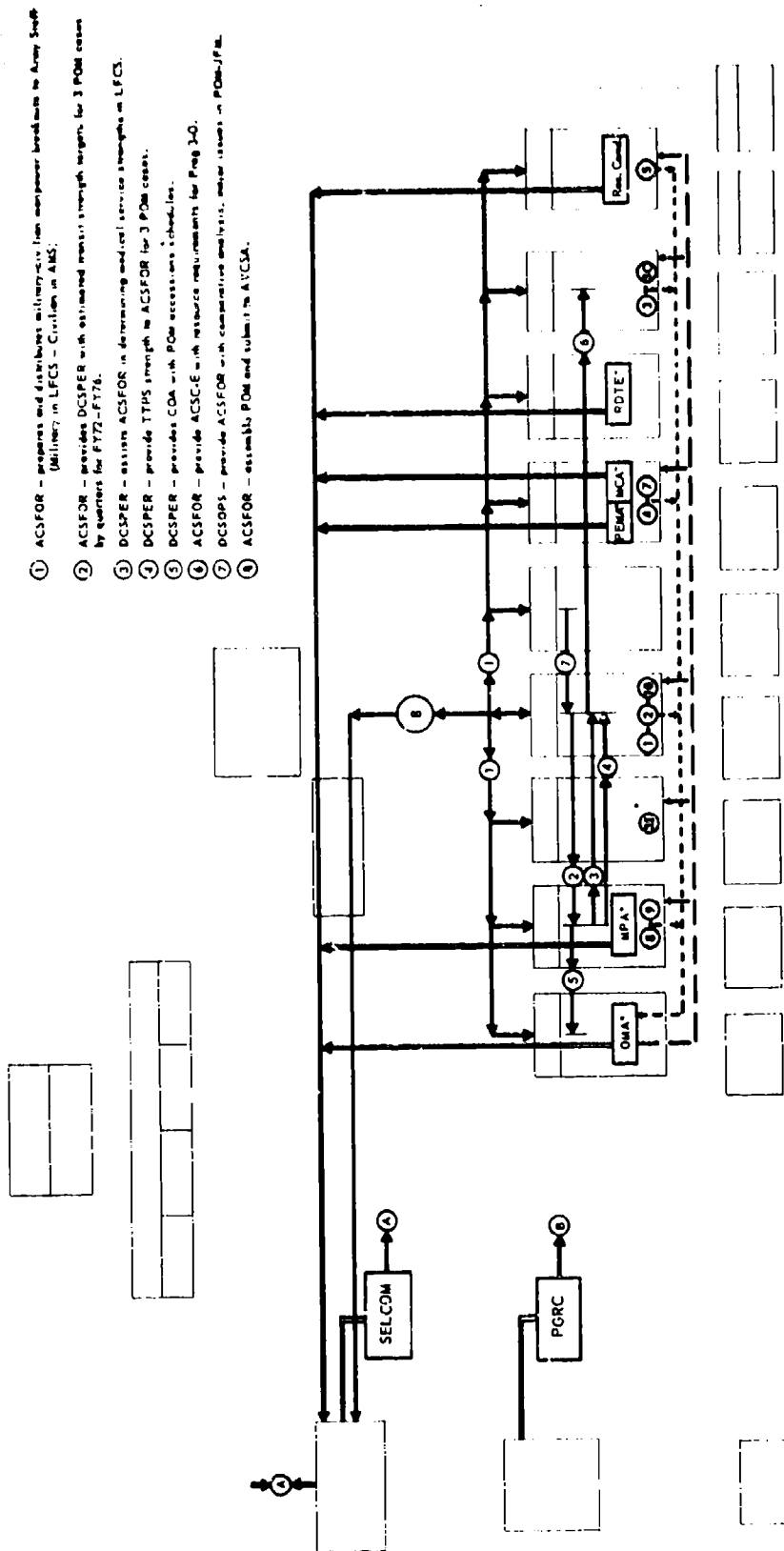


Fig. 2-2C—Staff Interfaces and Data Channels for POM Program Development and Submission

Table 2-1

Army Staff Committees Involved in Program Development and Budget Formulation

Committee	Chairman and Members ^a	Function	Authority ^a
Select Committee (SELCOM)	Chairman: The AVCSA Members: The DCSOPS, DCSPER, DCSLOG, COA, CRD, ACSFOR, CORC, ACSI, ACSC-E, SAMWA. The SAFEGUARD System Manager when SELCOM considers SAFEGUARD matters.	Review, coordinate, and act, or recommend action, on all matters relating to programming, budgeting, and the use of Army financial resources.	CSR 15-17 ⁸
Program Guidance and Review Committee (PGRG) (Subordinate to SELCOM)	Chairman: Director of Planning and Programming Analysis, OVCSA Members: Director of Army Budget, OCA; Asst. Director of Army Budget, (OMA), OCA; Directors or Division Chiefs responsible for programming in: ODCSOPS, ODCSPER, ODCSLOG, OCRD, ORC, OACSFOR, OACSI, OACSC-E, CNGB, CAR, SAMWA and SAFEGUARD System Manager sit as members when PGRG considers matters within respective purviews.	Develop proposed program guidance; review and analyze Army programming actions in the planning, programming, and budgeting cycle; and make recommendations to the Chairman, SELCOM.	CSR 15-22 ⁹
Budget Review Committee (BRC) (Subordinate to SELCOM)	Chairman: Director of Army Budget, OCA Members: Director of Planning and Programming Analysis, OVCSA; Directors having budgeting responsibility in: ODCSOPS, ODCSPER, ODCSLOG, OCRD, OACSFOR, OACSI, OACSC-E. Chief, Program Div., ORC, is member when BRC considers Reserve Component matters.	Review and analyze Army budgeting actions in the planning, programming, and budgeting cycle; prepare budget analyses; and make recommendations to the Chairman, SELCOM.	CSR 15-23 ¹⁰

^aOCA, Office, Comptroller of the Army; CSR, Chief of Staff Regulation; OVCSA, Office, Vice Chief of Staff, US Army; SAMWA, Special Assistant for the Modern Volunteer Army.

and constraints earlier described. Also identified are the separate military and civilian manpower programming paths existing in current system operations.

Programming Phases

The IMP-I study focuses on the manpower programming associated with future authorizations,* specifically those of a "budget year," defined as the fiscal year arrived at by adding one to the current fiscal year (FY).² Thus in FY71 the budget year was FY72. Within the annual PPBS cycle, Army resource programming activities addressing the budget year encompass two major sequential time phases. The first phase is program development, followed by the program-budget-formulation phase. In both phases the DA must cut and fit its authorization needs within rigorous but also constantly changing constraints and decisions that must be reflected through its own program development processes. As indicated in Fig. 2-3, the time span of these two phases is approximately 17 calendar months, from inception of program development to Congressional budget hearings, following the submission of the President's Budget for the coming budget year.

Program Development Phase

With the emphasis of the program development phase being on the Army force structure and the manpower and resources to sustain it, the ACSFOR has the principal responsibility for POM program development and coordination at the functional Army staff level.^{11, 12} This function is implemented within the context of the overall controls exercised by the AVCSA, SELCOM, and PGRC, as depicted in Fig. 2-2C and Table 2-1.

The publication of the "Army Force Development Plan," Vol I (AFDP-I)^{13, 14} completes the Army staff requirements planning that precedes and lays the groundwork within HQ DA for program development. The AFDP-I provides the basis for the DA response to OSD Tentative Fiscal Guidance Memorandum (TFGM). The latter indicated the proposed DOD fiscal ceilings and allocations by specific fiscal guidance categories against which Army requirements for forces, manpower, and other

*The term "requirements" is used in a general sense in the study. In manpower parlance, however, "requirements" strictly speaking refer only to the required column of the MTOE or TDA document of a unit.

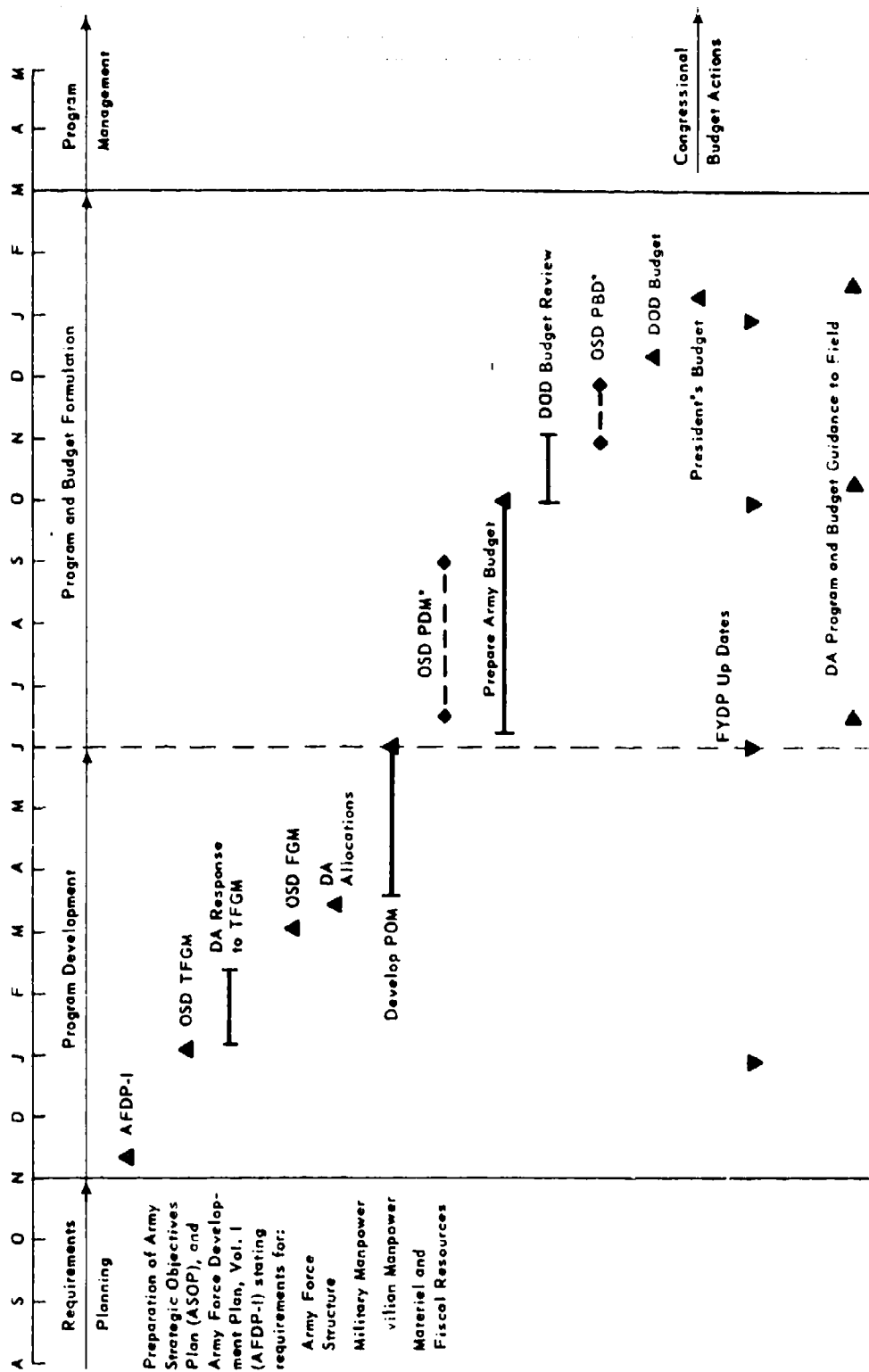


Fig. 2-3—Time Phases and Major Activities of Current Programming System

*PDM, Program Decision Memorandum; PBD, Program Budget Decision.

resources were measured. Following this DOD-DA consideration of Army requirements vs DOD allocations, the final OSD Fiscal Guidance Memorandum (FGM) provided allocation decisions by specific fiscal categories for the development of the three program cases (base, alternative, and decremented) to which the Army POM FY72-FY76 (budget year and four program years) was addressed.⁴ As indicated in the preceding section, the DA management level evaluated the effect of the FGM constraints on planned (AFDP-I) force, manpower, and resource requirements and reallocated the OSD fiscal constraints in these terms as the basis for POM program development by Army staff agencies.¹⁵ The omnibus Army POM submitted to DOD under the FGM constraints focused on the adjusted Army force structures that could be supported within these constraints. The related military manpower authorizations, proposed civilian manpower, and other resource funding allocations sought by the Army under the OSD fiscal constraints were developed for each POM case in the various program classifications (i.e., LFCS, FYDP, FGC, and AMS). These Army programs were expressed in both summary form and backup data detail. Submission of the Army POM to DOD by the Secretary of the Army¹⁶ generally marked the end of the program development phase within HQ DA. The overlapping transition to the subsequent program-budget-formulation phase—within the DOD PPBS procedures—was the DOD program review and decision process. In theory this process was to produce a series of OSD PDMs expressing DOD actions on the detailed Army programs. In practice the principal OSD decision on the Army POM FY72-FY76 approved the Army POM alternative program force structure, manpower, and resource allocations as the basis for initiation of the Army FY72 budget formulation. This rolled-up OSD decision could be interpreted as emphasizing the importance of the POM program development phase for establishing a valid basis for the allocation of military and civilian manpower as the justification and rationale for the subsequent Army budget submission.

Program-Budget-Formulation Phase

Program-budget formulation is a fiscal management activity under the functional Army staff purview of COA, through the BRC (Table 2-1) and AVCSA under overall policy direction of the Assistant Secretary of the Army for Financial Management, (ASA [FM]). Thus emphasis in

Army staff programming activity shifts from the development and analysis of force structure, manpower space authorizations, and cost estimating to a threefold effort:

First, the POM programs and OSD decisions are translated into detailed AMS appropriations program budget accounts for the Army budget to be incorporated into the total DOD budget, with continued concurrent updating of the FYDP (Fig. 2-3).¹⁷

Second, Army staff justifications are developed in functional budgetary terms for the defense of detailed Army budget programs in ensuing reviews by DOD program managers and higher agencies, to include Army appeals of OSD Program Budget Decisions (PBD).

Third, DA guidance is prepared and disseminated to Army major commands and agencies concerning programmed force and manpower authorizations, related DA programming assumptions, and command budgetary allocations so that the field can initiate command plans and command program budget development for the coming fiscal year. The vehicle for this guidance is the HQ DA COA publication, "Program and Budget Guidance to Major Commands and Agencies" (PBG).¹⁸ The sequential editions of the PBG (Fig. 2-3) reflect the continuing changes and adjustments to DA programs through the phase of budget formulations and submission. Command troop program guidance developed by OACSFOR is incorporated in the PBG, and military and civilian manpower programs are included in PBG annexes. The manpower content of the July PBG reflected the apportionment of previously budgeted funds; the October PBG, the budget submitted by DA to OSD; and the January PBG, the budget submitted by OSD to the President. Formerly, programmed military manpower authorizations in the PBG were expressed in the LFCS structure, while civilian manpower authorizations were stated relative to the AMS appropriations budget program classifications. In recent PBGs, both military and civilian manpower authorizations were stated both in program and appropriation terms. Only military manpower, however, were expressed in LFCS terms. These expressions of military and civilian manpower authorizations and allocations to commands and activities are also the basis for the OACSFOR inputs to the periodic FYDP updates (Fig. 2-3).

The outer bound of the program budget-formulation phase is the detailed program management activity involved in preparation for and implementation of the new fiscal year force, manpower, and detailed budget programs. Program management entails detailed program budget adjustments throughout the Army staff to accommodate: (a) continuing DOD-DA authorizations adjustments; (b) Congressional actions on the Army budget; and (c) budget apportionment and modification of programs and budget as a result of DA approval of field command inputs. The field input changes the DA force and manpower programming assumptions concerning (a) specific units and military manpower allocations, and (b) civilian authorizations and budgetary allocations based on commanders' views of their mission responsibilities.

Separate Military and Civilian Manpower Programming Paths

Reference has been made to the differing approaches to military and civilian manpower within HQ DA. The analysis of manpower programming within the current system operations (see App D) indicates two distinctly different programming paths within the system network. These dissimilar paths begin in AFDP-I manpower requirements planning and extend through both the program development and program-budget-formulation phases.

Within OACSFOR, force development planning and troop and manpower authorizations programming are performed in the Manpower and Forces Directorate (MFD).¹¹ The organizational structure, functions, and procedures of MFD reflected these differing approaches under the revised PPBS procedures in effect for the FY72-FY76 manpower programs. At the same time these dissimilar programming paths within MFD reflect the DOD-DA management controls and constraints, the corresponding requirement for military and civilian manpower authorizations development and interstaff coordination in multiple program classifications, and current HQ DA manpower policy.

These differing paths also indicate a carry-over of previous PPBS procedures and practices into the current programming system. These procedures stressed the DOD FYDP program classifications and program element structure as the principal means for comparison of programmed military and civilian manpower authorizations and allocations as a

function of program budget formulation. The foregoing evinces some lack of recognition of the inadequacy of the FYDP structure for internal DA manpower program analysis, evaluation, and decision making. This deficiency results from the different programming rationales by which the military and civilian manpower spaces and costs entered in the FYDP (and OSD FGC) program elements¹⁹ are developed.

In the analysis of the current programming system network (App D) it was noted that there was no method or direct linkage for meaningful comparative analysis of military and civilian authorizations and costs during program development, despite the importance of the POM for evaluating and establishing the allocation pattern and balance of military and civilian manpower desired by DA management for the budget and program years under the revised PPBS. Such program evaluation as was attempted at programming activity level was through an effort to review and compare military and civilian manpower in FYDP program element detail after the program-budget-formulation phase had begun. This condition made questionable the validity of the manpower program information on which the DA management level had to act during POM program development and approval. A logical consequence would be difficulty in justifying the relation and mix of military and civilian manpower authorizations in budget programs and significant reprogramming turbulence under the time constraints imposed on the preparation of the Army budget for submission.

Other System Considerations

A powerful third-generation computer capability supports OACSFOR.²⁰ However, military and civilian manpower programming procedures noted in current system operations rely principally on laborious manual methods for computational and analytical purposes and for the reduction of voluminous data detail to program summary information. When considered in the light of the multiple program classifications in which manpower program data and information are required, the resulting programming workloads and the effect on efficient program development and responsiveness to management information needs were significant. Some of this was attributed to the lack of working-level understanding and confidence in the utility of automation for complex high-volume data

handling. At the same time, staff user-data system support interfaces and responsibility for manpower data pronency appeared complex and unclear. As a result there was extensive manual bookkeeping by both military and civilian manpower programming activities.

The programming procedures outlined above, coupled with the unit-oriented approach to military manpower programming and the FYDP budget-oriented development of civilian manpower programs, create a condition of data redundancy and inconsistency at MFD programming activity levels and of potentially deficient management information at higher levels of OACSFOR and HQ DA. These conditions operate against the maintenance and use of a consistent manpower data base—common to both military and civilian authorizations programs—which is both current within the PPBS cycle and valid in terms of updated DA-level program data.

Visibility of Military and Civilian Manpower Program Relations

The multiple program classifications systems prescribed by DOD management controls and constraints do not afford the essential visibility of the relations necessary for integrated programming, allocations, or tradeoffs of military and civilian manpower at any level of the DA.* In the FYDP, FGC, and AMS budget appropriations, the only apparent common denominator for military and civilian manpower is TOA dollars. However, TOA program dollar allocations and military and civilian manpower spaces and costs are developed and allocated in such different ways within the DA that the utility of TOA dollars as the principal means of comparing military and civilian programmed allocations may be questionable. Moreover, the relation of Army missions and functions to military and civilian manpower spaces and costs is obscured by these various program classifications. In the LFCS structure, military manpower authorizations are visible relative to the force structure developed to accomplish Army missions and functions. But LFCS-structured military manpower cannot be directly compared with budget-structured civilian manpower. The translation and reaggregation of LFCS-structured

*Partial visibility is afforded by "Manpower Utilization and Requirements Reports" (Part A, CSFOR-78), which combines related military and civilian manpower data by program terms. This includes both actual and authorized, reported monthly for civilian manpower and quarterly for military.

military manpower to FYDP, FGC, and AMS program classifications and program elements—while meeting DOD management requirements—does not solve the military and civilian manpower visibility problems, either within OACSFOR or at DA management levels because no common basis for derivation of military and civilian program data is used in current programming operations (App D).

IMPACT OF FACTORS AFFECTING MANPOWER PROGRAMMING

Controls and Constraints

The DOD management controls and constraints, as implemented within the complex DA organizational structure, contribute to a compartmentalized stringently time-constrained programming environment. The basic assumption of the IMP-I study (Chap. 1) contemplates no change in the DOD controls and constraints for the approach to integrated manpower programming. This implies that the changes necessary for such an approach are internal to HQ DA and affect only the manner in which the Army implements these controls.

A major aspect of such internal change is the DA management actions and policy changes required to realign and minimize the conflicts inherent in the widely differing approaches to military and civilian manpower. To ensure that DA controls and constraints achieve the purposes of providing the DA management level with the basis for rational resource allocations and military and civilian manpower decisions in response to the constraints imposed on the Army, a common basis for developing and analyzing manpower authorizations is essential. The foregoing will require particular emphasis on the POM program development phase in the revised PPBS procedures in order that a logical pattern of manpower allocations is established as the premise for budget formulation.

The multiple program classification structures prescribed by DOD for Army force, resource, and manpower programs and fiscal control are a major aspect of the complexity of achieving efficient military and civilian programming. These multiple ways of classifying and displaying manpower do not currently provide a rational linkage between military and civilian planned requirements and proposed authorizations or meaningful visibility of allocations and potential tradeoffs either at

programming activity levels or at review and decision points at higher Army echelons. The IMP-I assumption, referenced above, requires that all these various methods of program classification will continue to obtain in any approach to integrated manpower programming. Therefore it will be necessary to identify a program classification structure for internal use in the DA that will utilize a common basis and common data elements for military and civilian manpower, display both military and civilian authorizations and estimated costs in a rational and directly comparable way, and be translatable to all program classifications required in the PPBS cycle.

Current System Operations

The complexity and compartmentalization of the overall operations of HQ DA within the PPBS cycle have an important bearing on manpower programming but are outside the scope of the IMP-I study. Within OACSFOR, however, some organizational complexity could be resolved through internal management action. This would be to the advantage of improved manpower programming efficiency and permit better staff contributions to the information needs of the Director, MFD, and higher echelons of ACSFOR and DA management. This would result from a closer tying together of the staff programming organizations and procedures with the considerable potential of the existing ADP capabilities supporting OACSFOR.

The current organizational structure and related procedures for force and manpower authorizations programming carry over from the realignment of various OACSFOR organizational entities under the cognizance of MFD when the latter was established in 1969. The resultant MFD span of control covers six principal staff divisions, comprising a total of some 20 functional branches. The staff activities within this complex organizational structure encompass (a) the dimensions of time, forces and manpower in the annual PPBS cycle, (b) force accounting data accretion from and management of current and projected fiscal year programs, and (c) internal program coordination and direction of the FYDP/OMA Program 1 (Strategic Forces), Program 2 (General Purpose Forces), and Program 10 (Support to Other Nations). Within these different functions, internal coordination, organizational

responsibilities, and input-output relations relative to programming procedures are not clear. Neither are there clearly defined relations for mutual support among MFD organizational entities and prescribed use and control of manpower data sources. These conditions both reflect the separate military and civilian programming paths and contribute to their existence. Even with no change in the current programming system the need exists for closer interfaces of staff programming organization and procedures with the existing ADP capabilities supporting ACSFOR. Included in this context would be emphasis on the utility and consistent use of the Force Development Management Information System (FDMIS) data files and programs in both military and civilian manpower programming, in force structuring, and in the input-output relations among the various automated files for this purpose.

The effects of the foregoing would be to reduce and streamline current manual procedures of programming activities and to maximize computer usage for high-volume data processing and programming operations. This would permit reducing the present volume of manual work load under heavy time pressures and would free manpower programmers and analysts for analysis as part of the high-level manpower management and decisionmaking process. Also the increased use of the FDMIS for manpower programming and analysis would both purify and strengthen the existing automated data files as a result of a close staff user-computer system input-output relation, and the ADP programs involved would become more useful. A related effect would be that all book-keeping could be picked up on the computer, and all programming would be done from a consistent and integrated data base. A computer-based programming system would treat programming data both selectively and objectively. System objectivity can help minimize the frictions that can develop in a complex resource management process wherein various organizational competitive biases and intuitive or judgmental viewpoints may conflict. Such a system should not suppress these differences of views or judgment but require those who argue for them in the program-development decision-making process to speak from the same set of facts and programming factors. These considerations are essential to sound programming procedures and to effective decisions and policies by responsible DA officials at successively higher echelons.

The program decisions made at the higher levels of ACSFOR, DA, and DOD are not made on the level of detail currently developed by manpower programming activities but on much higher aggregations of manpower data and information. Because of the time-consuming aspect of detailed manual programming and bookkeeping methods in the current system, timely and valid staff responses to higher management information needs in the desired forms may be lacking at critical management decision points in the program budget cycle. Much of the emphasis on detail in current systems operations is apparently engendered by convictions that detail of itself is evidence of substantive accuracy of program content and supporting analysis. This is in contrast to the use of programming time for analytical manipulation of quantitative data and factors to develop program content and present possible options in appropriately aggregated form for review and decisions by higher DA management echelons.

Chapter 3

GENERAL APPROACH TO INTEGRATED MANPOWER PROGRAMMING

INTRODUCTION

Analysis of current system operations provides the general approach to manpower programming. The approach permits consistent visibility of the military and civilian manpower space-cost mix of the Army in comparable terms throughout the Planning, Programming, and Budgeting System (PPBS) cycle at all levels of Department of the Army (DA) management. The approach visualizes the translation of integrated military and civilian manpower data and information to the fiscal and budget classification systems in the PPBS by systematic application of established data elements.

BASIC PREMISE

To attain an integrated manpower programming capability, the Army force structure should be used for integrating manpower authorizations in all phases of the Army PPBS cycle. All data should be based on the units of the force structure. Data in these units would expedite processing, analysis, and production of military and civilian information in the various formats of the DOD-DA fiscal classification, and provide manpower data for budget formulation. The lack of a force structure correlation of civilian manpower is an obstacle to rational manpower allocations and tradeoffs in the current system. This is a contributing factor to the divergence in the military and civilian programming paths and the differing approaches currently employed in program planning and development.

ARMY FORCE STRUCTURE

The Army force structure is the basis on which Headquarters DA attempts to meet its objectives and logically provides the framework for

all related resources. Army combat operations are generally unknown but assumed future conditions. Army force structure (and hence manpower) considers three time-frames: existing, programmed, and planned. Under all combinations the force structure must provide the framework for displaying the four following aspects of force and manpower relations. These are:

- The capability to express geographically separate missions, doctrine, and complementary interdependent functions.
- A method to reflect inherited assets as well as changes in organization and capabilities of the manpower resources of the Army.
- A central point of reference for manpower control.
- A systematic indexing of manpower specifications and authorizations.

Force Structure-Manpower Program Interdependence

The fundamental purpose of the DA manpower programs should be to ensure the support of the Army force structure subject to the constraints imposed on it. The programs should identify the manpower resources to be authorized to the units composing the force so that these may effectively perform their intended functions. Also, force structure-derived manpower should provide the basis for computation of manpower funding estimates for the budget year force and furnish the force manpower authorizations on which the Army's military and civilian personnel systems can determine personnel adjustments required when the budget year transits to the new current fiscal year.

In the development of Army manpower authorizations in the program development phase there is no ascertainable reason for the differing approaches to military and civilian manpower except institutional antecedents. Both types of manpower can be related to the specific units of the force structure necessary to attain the Army objective for any time frame. In a significant portion of the force structure, particularly in support functions, military and civilian manpower could be interchangeable. Therefore civilian manpower is as integral to the force structure as military manpower and should be similarly treated in all phases of force structure and manpower development and programming, using units for the basic manpower data structure.

The concept of a unit as a basic module is recognized by DA planning where force structure and troop program design are concerned. The application of the unit modular concept has increased with the implementation

of the PRIMAR 3-2 study²¹ and has aligned military manpower programming with force structure development and programming.²² This is particularly so in terms of common data language and program classification structure. The inability to establish integrated manpower relations in the current system appears grounded in a general lack of understanding of the unit-based civilian manpower associations with the force structure.

Early Consideration of Military and Civilian Manpower

Staff and management consideration and integrated development of civilian manpower in relation to the force structure and military manpower must begin early in the Army program development phase. Ultimately the budget submission, as a chart of accounts, becomes the instrument of military and civilian manpower authorizations funding. However, under the revised Department of Defense (DOD) PPBS procedures now in effect, the comprehensive manpower content of budget programs appears to be determined to a far greater degree by the DOD program objective approach than under earlier PPBS procedures. Thus analysis and decisions affecting the military and civilian force structure space-cost mix necessary to obtain balanced and justifiable budget programs must begin early in the planning portion of the program development phase. Notwithstanding the DOD-DA program decision reconsideration process, Office of the Secretary of Defense (OSD) decisions on the Program Objective Memorandum (POM) have the effect of inhibiting DA management and programming flexibility during the development of the budget program. This is because the OSD decisions on the POM manpower programs and the differing ways in which these must be re-structured essentially "lock in" the Army manpower allocations and related total obligational authority (TOA) the budget programs must detail.

A major weakness in current programming system operations is the deferral of comparative military and civilian manpower analysis at the programming activity level until the program-budget-formulation phase begins. The effects of this deficiency are compounded by the lack of commonality of manpower program structure and data sources, a lack that can be traced back to the differing manpower space-cost inputs and information displays in the "Army Force Development Plan" (AFDP) Vol I. This problem is made even more difficult by the fact that the Five Year Development Plan (FYDP), Fiscal Guidance Categories (FGC), and Army Management Structure (AMS)

classifications are based on DOD and DA cost accounting and fiscal control precepts. Manpower cost implications must be computed and displayed in these classifications to respond to DOD PPBS requirements and OSD-DA management controls and budget programming. However, these classification structures do not provide for the development and analysis of manpower within the internal structure of the Army.

THE UTILITY OF THE LFCS IN INTEGRATED PROGRAMMING

General

Among the classification systems required by DOD and DA for imposing management control and fiscal constraints on Army resources in the PPBS process, only the Land Forces Classification System (LFCS) displays the Army as a coherent system of interrelated mission and support components. These relations establish the nature and unit content of the force structure and—under current procedures—the military manpower authorizations required to man the structure.

The structure of the LFCS is depicted in some detail in the discussion of the multiple program classification systems in App C. Further details concerning the specific composition and content of the LFCS components (force categories, associated force packages, and individual manpower) are included in Ref 5, the DOD document that established the LFCS in 1968. The purpose of the following is to develop the utility of the LFCS as the programming integration link for planning, programming, and budgeting manpower.

Current LFCS Applications

The LFCS structure is used within HQ DA to analyze and summarize Army force requirements, force structure and military manpower specifications, program authorizations, and changes throughout all phases of the PPBS cycle, as shown in Table 3-1. Figure 3-1 also illustrates the force unit and military manpower information aggregations afforded by the LFCS. These range from the macro Army-wide information summaries down to the micro level of table of organization and equipment/table of distribution and allowances (TOE/TDA) unit and manpower data detail in the supporting data base. At intermediate aggregation levels, force and manpower information can be stratified by force packages or by Army commands, agencies, and functional activities associated with force packages,

Table 3-1

APPLICATIONS OF THE LFCS IN CURRENT PPRS OPERATIONS

Used in ^a	Time period projected	Application ^a
AFDP-I	Budget Year + 1 thru Budget Year + 10	<ol style="list-style-type: none"> 1. Provides CSA approved objective force and military manpower specifications to Army staff and commands for planning and programming guidance. 2. Provides basis of DA comments on TFCM. 3. Input for SA-CSA analysis of OSD FGM and initial allocation decisions required to meet OSD fiscal constraints on force and military manpower authorizations.
PCRC guidance	Current and Budget Year and Program Years as specified by OSD FGM	<ol style="list-style-type: none"> 1. Guidance to Army staff programming activities for development of POM force structure and military manpower authorizations 2. Information summaries for SELCOM and SA-CSA management actions to balance program forces, military manpower, and fiscal constraints.
Army POM	Current and Budget Year and Program Years as specified by OSD FGM	<ol style="list-style-type: none"> 1. Summarizes for SA-CSA and OSD the force structure and military manpower allocations and authorizations derived under OSD fiscal constraints. 2. Provides basis for DOD program decisions on military manpower programs for Budget Year.
AFDP-II (Budget Year Force and Military Man- power Program)	Current and Budget Year	<ol style="list-style-type: none"> 1. Provides summaries and troop list detail of unit structure and military manpower authorizations of Budget Year Force, based on OSD program and budget decisions and reprogramming decision by DA management. 2. Projects unit changes in quarterly Troop Action Book (TAB).
Program and Budget Guid- ance, Military Manpower Annex	Current and Budget Year	<ol style="list-style-type: none"> 1. Provides military manpower authorizations Army-wide (Vol I) and by commands and agencies (Vol II), based on unit changes in programmed force structure resulting from budget decisions, DA reprogramming, unprogrammed requirements, and adjustment to programming assumptions.

^a PCRC, Program Guidance Review Committee; OSD, Office, Secretary of Defense; FGM, Fiscal Guidance Memorandum; CSA, Chief of Staff, Army; TFCM, Tentative Fiscal Guidance Memorandum; SELCOM, Select Committee; SA, Secretary of the Army.

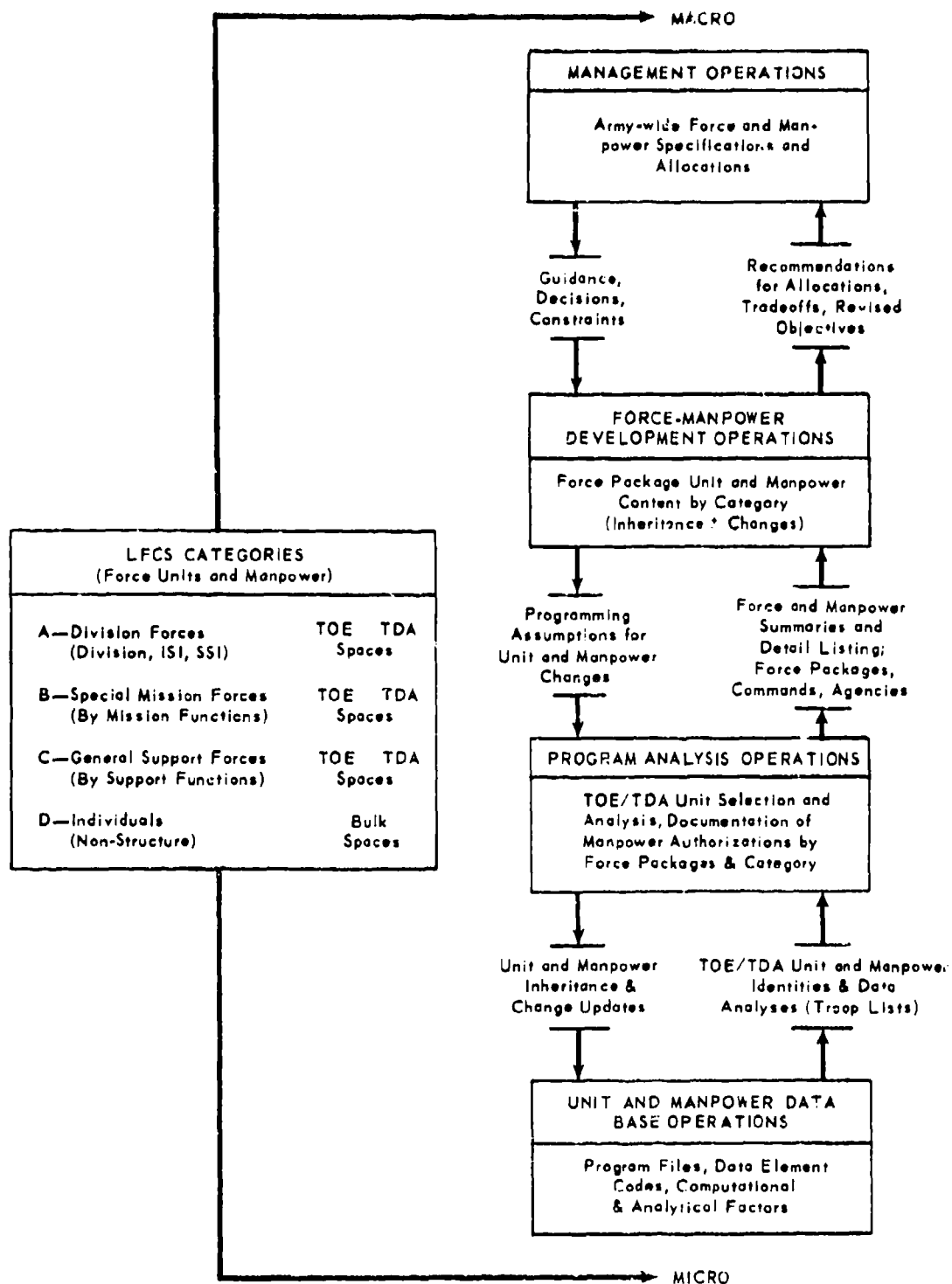


Fig. 3-1—The Spectrum of Unit Manpower in the LFCs

with further breakdowns to troop list detail as required. The use of time-phased projections (e.g., current and budget fiscal years, program or out years, etc.) in conjunction with the LFCS force categories results in a force and manpower matrix of change over time in any level of detail.

Owing to the flexibility of its applications, the LFCS encompasses all the principal characteristics of the force structure described in the preceding section. In portraying the Army as a functional system, the LFCS generally meets the criteria for an objective-oriented basic classification structure for reflecting both military and civilian manpower on an integrated basis. These criteria are considered to be:

- Completeness: The ability to correlate systematically all Army missions, functions, forces, and manpower in a meaningful quantitative manner.

- Consistency: Provision of a coherent and consistent framework for the visibility of quantitative military and civilian manpower balance and the effects of change on a directly comparable basis.

- Data Availability: Utilization of definable data element modules as the principal source for all levels of information aggregation and projection.

- Standardization: The ability, through use of standard data element codes, to reaggregate unit source data so as to translate (crosswalk) military and civilian manpower information to other program classification structures with an established audit trail.

The Unit as the Manpower Programming Module

Except for the bulk individual military manpower (nonstructure) Category D (transients, trainees, patients, prisoners, students, and cadets), all other military spaces and all civilian manpower spaces can be identified with an existing, programmed, or planned unit of the Army through an existing Army data element structure within the ACSFOR Force Accounting System (FAS) as discussed in Chap. 4. By use of specific data element codes and automated procedures, unit-associated military and civilian manpower data can be aggregated or detailed in LFCS categories and stratified or extracted in a variety of ways for analysis and information display.

Units are of two kinds: TOE units and TDA units, as defined in Army Regulations.²³ The principal distinction between TOE and TDA units as programming data modules is that there may be several TOE units of the same kind within any force structure grouping but only one of each kind of a TDA unit. This is because TOE units have fixed output or capability defined by doctrine and broad mission assignments (i.e., combat, combat support, or combat service support). TDA units, on the other hand, have a variable output or capability relative to the complementary functions they are intended to perform within the force structure (e.g. command, administration, personnel support, logistical operations, etc). A further distinction between TOE and TDA units is their manpower content. By Army policy, TOE units are composed solely of military manpower because they are designed to be deployable.* TDA units, being essentially force structure overhead and support may be composed of military manpower only, or more usually comprise both military and civilian manpower spaces. In some types of TDA units, maximum use of civilian manpower is required by policy or management decisions. For example, it may be necessary to conserve military manpower spaces to permit maximum manning of TOE or "mission" force structure units within fiscal or strength constraints imposed on military manpower. In other cases the nature of a TDA unit's functions may lend itself to more economical manpower costs, efficiency, and continuity of operations through use of civilian manpower, with military spaces limited to supervisory and management positions.

TDA units may be considered unique owing to their variable output and capability. However, as programming data modules they are similar in their overall composition and pattern of organization since they are based on standardized DA staffing guides²⁴ just as TOE units are based on manpower authorization criteria (MACRIT), as defined in pertinent regulations.²⁵

Unit Manpower in LFCS Categories

Figure 3-2 illustrates in relative proportional terms the TOE and TDA unit distribution of military and civilian manpower by LFCS structure categories and general geographic distribution.

*TOE units may have TDA augmentation carrying associated civilian positions.

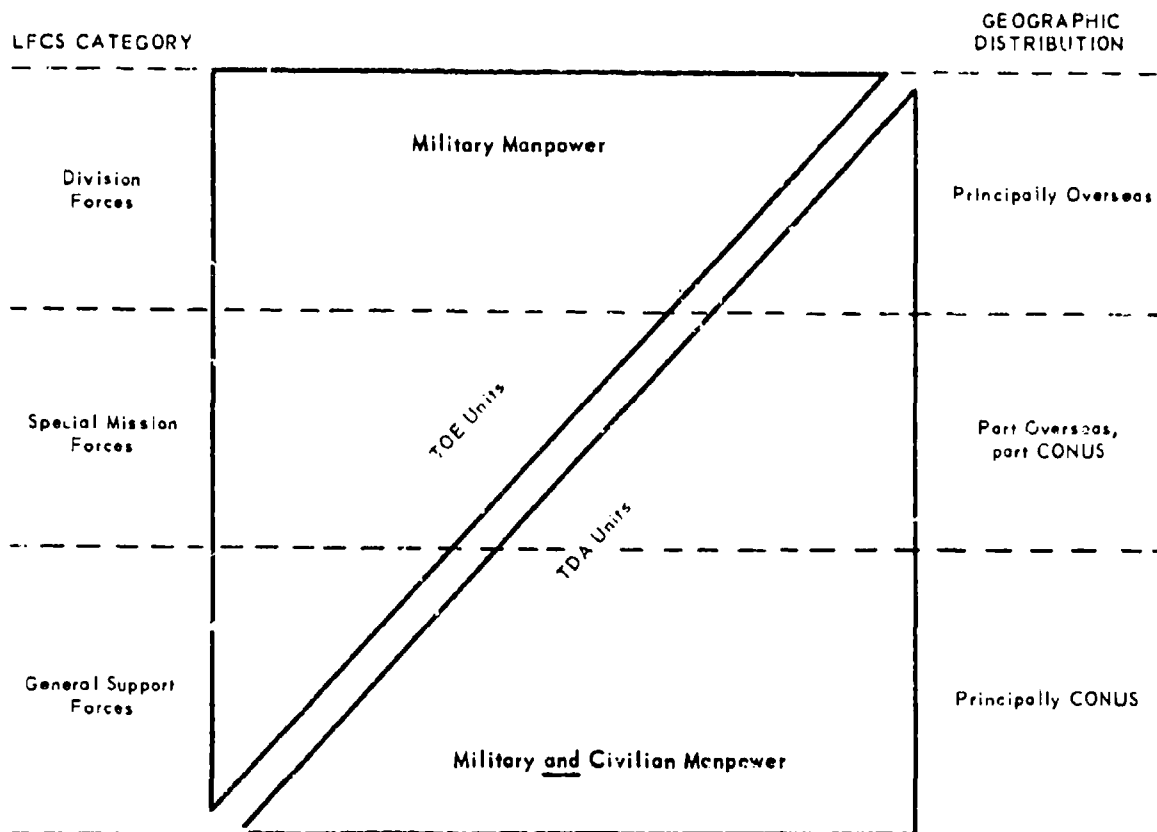


Fig. 3-2—Active Army Force Structure Military and Civilian Manpower by TOE/TDA Units and Area

As depicted in Fig. 3-2, each LFCS category comprises a different mix of TOE units and TDA units, with the bulk of the TDA units related to the General Support Category and located principally in CONUS units. If used as the framework for the integrated analysis and display of manpower information developed from consistent data based on unit manpower content, the LFCS structure would enable both management officials and programming activities to determine the proportional manpower mix of the Army in terms of the missions the force structure is to perform.

MANPOWER DEVELOPMENT AND ANALYSIS

Systems Approach

In order to realize the potential of the FAS data element structure in manpower programming, a major redirection of the current approach is indicated. A systems approach that incorporates military and civilian manpower as part of the total Army system reflected by the force structure will require new analytical techniques for operating on the FAS data base.

Analytical Factors

An important element of any form of quantitative analysis is the factors used in computations. In manpower programming such factors may be expressed as numerical ratios; e.g., the numbers and types of support units to supported units. Manpower coefficients may relate the amount of TDA support manpower to a given support mission, function, or work load. Manpower cost estimating relations (CER) are dollar factors to determine the estimated cost implications of programmed manpower allocations in the force structure, or for the adjustment of manpower strengths and unit composition to meet fiscal constraints. Moreover, since such factors are important programming data, they should be available in readily accessible form, such as an automated file, for ease of updating and dissemination.

An example might be a regionally constructed file of civilian manpower compensation factors applicable to the various kinds of civilian manpower (i.e., US direct hire, foreign direct hire, and foreign indirect hire) for overseas areas and CONUS. Application of these cost estimating factors to civilian manpower authorizations in TDA units by means of computerized cost equations would permit rapid computation of civilian manpower cost estimates in program development or budgeting activities.

Through use of the pertinent FAS data element codes, manpower cost estimates could be produced in detail and summary forms in LFCS, FYDP, FGC, and AMS program classifications.²⁶ A similar approach for military manpower cost estimating, based on standard Military Personnel, Army (MPA) factors (developed by DCSPER), would permit military and civilian manpower cost comparisons in force structure terms as well as in the other program classifications. This would afford both programming activities and management levels the necessary insights for military and civilian manpower cost tradeoffs, identification of imbalances, and potential areas for reallocations. Other manpower factors are indicated in the consideration of models.

Use of Analytical Models

Modern systems analysis draws on modeling techniques for quantitative analysis. Models are characterized by the ability to make successive iterations under revised parameters to produce a range of possible outcomes. Because of the need to handle large volumes of data in complex interrelated form, such models are generally computer-supported. An example of the scope of application and value of such analytical models within HQ DA is the RAC-developed FOREWON model²⁷ used by the Office of the Assistant Vice Chief of Staff, Army (OAVCSA) in objective force design and analysis. At the Army Secretariat level several RAC-designed computerized models²⁸ are in almost continuous use by the Office of the Assistant Secretary of the Army, Manpower and Reserve Affairs (OASA [M&RA]) for military manpower program analysis bearing on such important policy issues as draft calls, military manpower costs, promotion policies, and active and Reserve component military manpower distribution. The latter models are based on the LFCS structure and use both simulation and linear programming techniques to produce rapidly in useable form the information necessary for high-level management review, staff analysis, and management decision making on military manpower and personnel policy questions.

Analytical modeling is an accepted methodology in force and military manpower analysis. The feasibility of incorporating unit-derived civilian manpower with military manpower in analytical models for integrated manpower development and analysis of programs and budgetary data and information is considered attainable.

Significantly, the basis of this approach is already in existence

within the Office of the Assistant Chief of Staff for Force Development (OACSFOR) in at least a rudimentary stage of development. This is in the so-called ARMS Model (Army-wide Requirements Model for Support Manpower)²⁹ and the existence of a considerable body of empirical workload and staffing data generated by the ACSFOR worldwide manpower utilization reporting system (CSFOR-78) prescribed by AR 1-46.³⁰ A brief description of these existing modeling capabilities follows:

ARMS Model. The ARMS Model is a computerized model for computation and analysis of broad support manpower resources in relation to planned Army-wide military strength. The model is under the organization aegis of the Utilization and Standards Division (US) Manpower and Forces Directorate (MFD), OACSFOR. It addresses both military and civilian support manpower in the LFCS categories and force packages (see Fig. 3-2) by application of empirical data in equations directly related to the support requirements of the planned LFCS force packages and related command distributions of manpower. Owing to its use of the LFCS structure, the ARMS Model would be of particular utility in the development of military and civilian support manpower in the General Support category of the force structure where the bulk of TD military and civilian manpower is involved. The model deals with some 24 workload functions identified by AMS-FE (program element) codes, utilizing some 143 estimating equations or factor relations, which also address regional or geographical differences. As indicated above, the ARMS Model is not in advanced development nor is it currently applied in ACSFOR manpower programming activities. However, it does reflect a basic capability that, by extension, refinement, and development of interfaces with the FAS force files, could permit integrated military and civilian manpower program development and analysis by association with unit identification code (UIC)-identified manpower data elements in the FAS data base. This would also afford a capability for analysis of the variable output of TDA units, discussed earlier in this chapter, as the basis for measuring and evaluating changes of manpower content in the force structure or projecting inheritance factors.

Functional Manpower Staffing Factors. Manpower staffing factors for use in determining the requirements of military and civilian support manpower in force structure TDA units are essential to sound program development and analysis. Such factors can in part be derived from the data

generated over the years by the CSFOR-78 (Part A) manpower utilization reporting system managed by MF-US.* However, although CSFOR-78 (Part A) data are submitted by commands and agencies in automated format,³⁰ this input is not at present maintained in readily accessible automated form for use in a computerized programming system. At the same time, informal OACSFOR documents indicate that a computer method has been developed to enable CSFOR-78 staffing data to be developed into various staffing standards applicable to measurement of both historical utilization and projected performance of support manpower based on ratios, regression analysis, and curvilinear and logarithmic methods. As in the case of the ARMS Model above, it would be necessary to devise a systems tie-in for the application of staffing standards and analytical techniques with force structure-based manpower modeling and the FAS data base for an integrated manpower programming capability to be realized. Caution must be exercised in using the ARMS Model or any similar technique based on regression analysis because it would tend to perpetuate any mismanagement reflected in the base data. Civilian hire is quite subject to executive management prerogatives, and a change in policy could invalidate the regression equations.

SUMMARY OF THE GENERAL APPROACH TO INTEGRATED MANPOWER PROGRAMMING

Major Considerations

The Army force structure system provides a meaningful basis for integrating military and civilian manpower authorizations development and programming. Incorporating civilian manpower within the context of the force structure system during all phases of the PPBS cycle would contribute significantly to alleviating the programming divergencies in current system operations. It would provide HQ DA management and staff and programming activity levels with the requisite visibility of military and civilian manpower associated with the units that make up the Army as a total system. Achievement of this requires emphasis on certain methodological considerations, as follow:

— Effective and valid programming demands use of a single integrated unit-oriented data system and intensive staff management, control, and proponent responsibility for data and information inputs and outputs.

* Command Requirements and Allocation Division (CRA) is the proponent for the CSFOR-78 report.

— In conjunction with staff cognizance of programming data detail, manpower planning-programming activities and the data system must interact to produce related aggregated program information for use by management at the higher levels of OACSFOR and HQ DA throughout the PPES cycle in all required program classifications, but using the LFCS as the central point of reference.

— Different outputs will continue to be required for military and civilian manpower in the translation of program authorizations into budget detail, owing to the differing ways these must be reflected in the appropriations and budget structure. However, integrated program development and consistent operations on a continuously updated force and manpower program data base will permit greater responsiveness through use of automation to produce budget program detail.

Civilian Manpower Integration in Force Structure

Beginning with requirements planning in the AFDP-I force structure development, aggregated civilian manpower would be incorporated in the LFCS TDA components of the structure on a unit mission basis, as is currently done for TDA military manpower. The baseline for these aggregated military and civilian strengths would be derived from the continuously updated FAS authorizations files. These LFCS-structured aggregations would provide the basis for evaluating the manpower mix in visible force structure terms. By operations on the key data element codes of the FAS, LFCS-structured manpower could concurrently be reaggregated to the other program classification structures for further comparison, as discussed in Chap. 4. The LFCS (Figs. 3-1, 3-2) would be the central point of reference for program construction, analysis, and review. During program development of the fiscally constrained programs for the POM, the functional support and overhead areas where military and civilian manpower are interchangeable (see App A, AR 1-46³⁰) would be identified for each command and agency. UIC-related military and civilian manpower content in these areas should be developed, analyzed, and evaluated concurrently as program development progresses.

Substitutability constraints for support military rotational and training base requirements would be established relative to least-cost manpower considerations based on common peacetime staffing and functional workload factors. Manpower CERs for general classifications of military

and civilian manpower would be applied to the above factors and reaggregated to the functional AMS subprogram level and FYDP PE level. Comparative analyses of these unit-based aggregated military and civilian spaces and costs would permit cost-based tradeoffs to be identified for achieving effective balance between military and civilian manpower for the functional workload, within prescribed constraints. The resulting support military and civilian space authorizations would then be distributed to projected TDA units in the DA force structure troop lists and in the budget year Army Force Program (AFP) (AFDP-II). Civilian manpower cost data generated by these procedures should also be considered by the Comptroller of the Army in allocation of TOE to appropriations and program directors for program development. Such manpower costs might be "fenced" for those functional program areas where the support manpower balance is critical to mission accomplishment or otherwise constrained by military end-strength or other controls and constraints by DOD or HQ DA. This would not change the overall DCSFER functional responsibility for development of the total TOA requirements for the MPA appropriation. The purpose would be to enable MFD program activities and higher review and management levels to focus on program cost implications as manpower programs are refined and reviewed during program development.

Program analysis of support military and civilian manpower authorizations, based on the force structure data maintained in the FAS, would continue in the program-budget-formulation phase as an added aspect of the staff capabilities study of the budget year AFP.³¹ Where projected military personnel inventories made during the capabilities study indicated significant shortfalls in common noncombat related occupational skills, potential tradeoffs between military manpower procurement and training costs relative to civilian manpower costs for these occupational areas should be analyzed. Related reprogramming requirements for TOA between MPA and the other appropriations would be defined as a product of the capabilities study.

Basis for System Development

The FAS data system, together with existing but rudimentary analytical systems and methods available within OACSFOR, can provide a usable basis for development of a force-structure-oriented computer-supported integrated manpower programming system. Such a system is depicted in the

methodological concept described in the following chapter. The technical effort in system development should be concentrated on interfacing and augmenting these capabilities within a complete system logic design. Detailed data-information flows and processing schemes for system integration of the FAS data base, analytical modeling applications, and cost-manpower programming factor files would be developed, to include design specifications for the latter two areas.

Chapter 4

IMP METHODOLOGICAL CONCEPT

OVERVIEW

Integrated unit-based military and civilian manpower programming in support of the Army's force structure requires consistent visibility of military and civilian space-cost implications throughout the various DA management decision and review points. Both an enhanced information display capability and an interactive force structure and manpower program modeling capability for portraying program alternatives are needed. These would provide the required visibility and would service the specialized data requirements of the numerous DA functional activities and organizational levels involved.

In furtherance of the general approach in Chap. 3, this chapter describes a general methodological concept for realizing military and civilian manpower space-cost visibility through modifications and additions to existing staff programming procedures and supportive force structure and manpower data systems.

Organizational and Functional Elements vs Data Flow

The operating environment in which the IMP concept will be implemented can be described in terms of the data flow that links three distinct organizational and functional levels during force structure and manpower program development. The three levels are represented by top-level decision makers, previously described in Chap. 2 as Army Secretariat-Chief of Staff levels of review and decision, an analytical or operating level at which force structure and manpower programs are developed and coordinated with concerned Army staff agencies and major commands, and a data base maintenance level at which force and manpower data files are continuously updated to reflect the effects of actions

taken at the two previous levels. Examples of these actions would be Office of Secretary of Defense (OSD) Program Decision Memorandums (PDM) and Program Budget Decisions (PBD) and the results of coordination between the Office of the Assistant Chief of Staff for Force Development (OACSFOR) manpower program analysts and staff program, subprogram, and program element (PE) directors.

Each of the three levels above has particular data requirements. As depicted in Fig. 3-1 (Chap. 3), management levels require highly aggregated information providing alternatives from the principal classification systems. Operating levels require more detailed information focused on particular areas selected for analysis. An example would be the force mission-support balance and military and civilian space and cost implications in the support program for a particular command. At the third level, that of data base maintenance, a requirement exists for the capture of details pertinent to individual TOE/TDA units and program elements.

The relations that exist among the three levels, the resulting data flows, and the development of programs are expressed in Fig. 4-1. The feedback effect illustrates the iterative process whereby various sectors and levels produce a constantly altering set of factors to be considered in the developmental process. The effects of these factors must be incorporated into existing or planned force structures and manpower programs and, where appropriate, transmitted to staff activities as required. Such a process depends on a comprehensive and totally responsive data system.

As indicated in Chap. 3 the existing capability for data display concerning current and planned force structures and manpower programs resides within the Force Accounting System (FAS). Its particular relevance to the IMP methodological concept will be examined in a subsequent section concerning an improved staff-automatic data processing (ADP) operational interface. For the present the FAS relation visualized with other components of the Manpower and Forces Directorate (MFD) development operation will be described.

The Force Structure and Manpower Program Operating Environment

The functional structure through which MFD activities interface with other DOD and DA activities and associated data flows is illustrated in

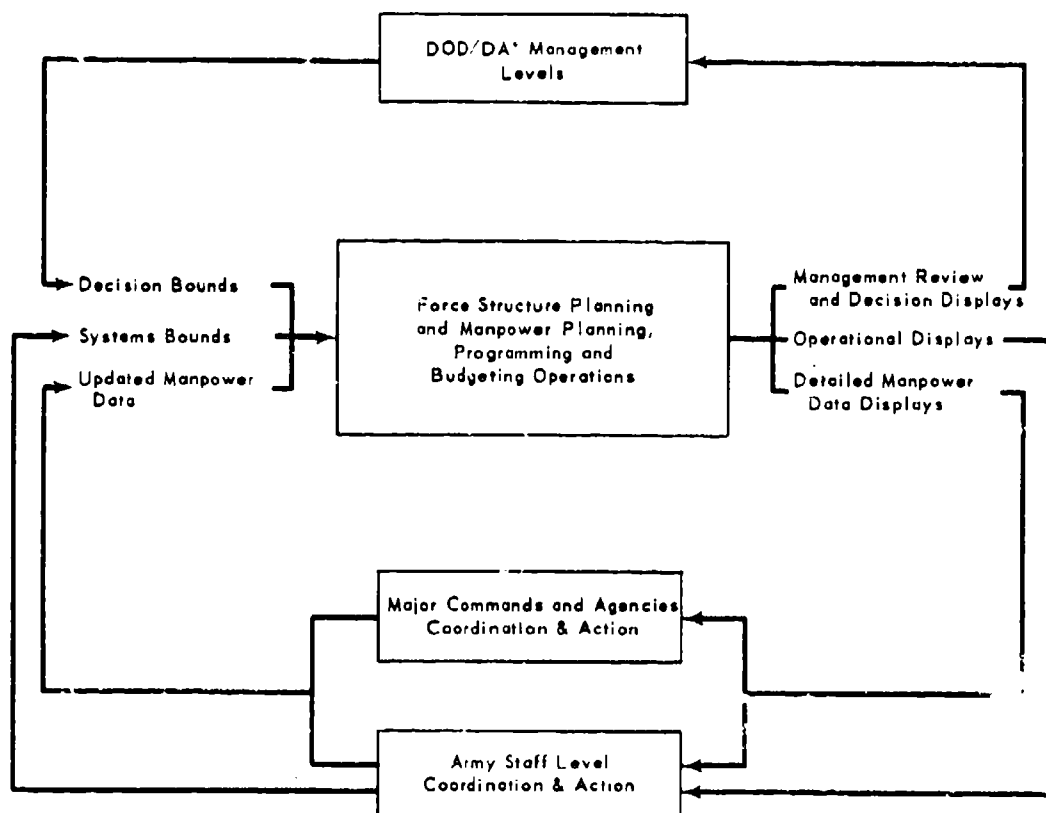


Fig. 4-1—Data Network Associated with Force Structure and Manpower Program Development

*DOD, Department of Defense; DA, Department of the Army.

Fig. 4-2. The major components depicted (inputs, operational procedures, data bases, and output) provide both a framework for discussion of functional relations and major subject headings for subsequent discussions of modifications required in the present system under the IMP methodological concept.

The three-tiered nature of the data flow, which transcends the entire force structure and manpower development process, is again represented in Fig. 4-2. Principal inputs to the system can be categorized as to their source and nature with decision bounds generally originating from DOD-DA Secretariat level, with additional Army inputs from Assistant Vice Chief of Staff, Army (AVCSA), Select Committee (SELCOM), Program Guidance Review Committee (PGRC), and Budget Review Committee (BRC) sources; systems bounds derived from Army staff analysis, action, and coordination between Army staff elements and with appropriate commands and agencies; and detailed manpower data updating achieved through automated and manual data exchange between the Force Development Management Information System (FDMIS) and interfacing systems maintained at DA and command levels.

Control of the force and manpower program development process is maintained through MFD operational procedures and methods instituted for both staff programming actions and interfacing ADP systems which support staff actions. This component encompasses the full range of staff analysis, actions, and coordination undertaken within MFD to develop force structures and military and civilian manpower programs for the current, budget, and out years. Included are the procedures that allow program analysts to access, update, and restructure manpower data maintained within the FAS force files, Manpower Annex Data (MANEX), and Five Year Development Plan (FYDP) and perform a limited range of force and manpower program simulations using such models as the Battalion Slice and the augmented ARMS-type analytical model oriented on the Land Forces Classification System (LFCS).

Providing the data support to staff operations are data bases available through the FDMIS and other staff and command sources. Shown in Fig. 4-2 are the FAS force files and MANEX files as well as additional files that must be modified for an interface capability under the IMP methodological concept.

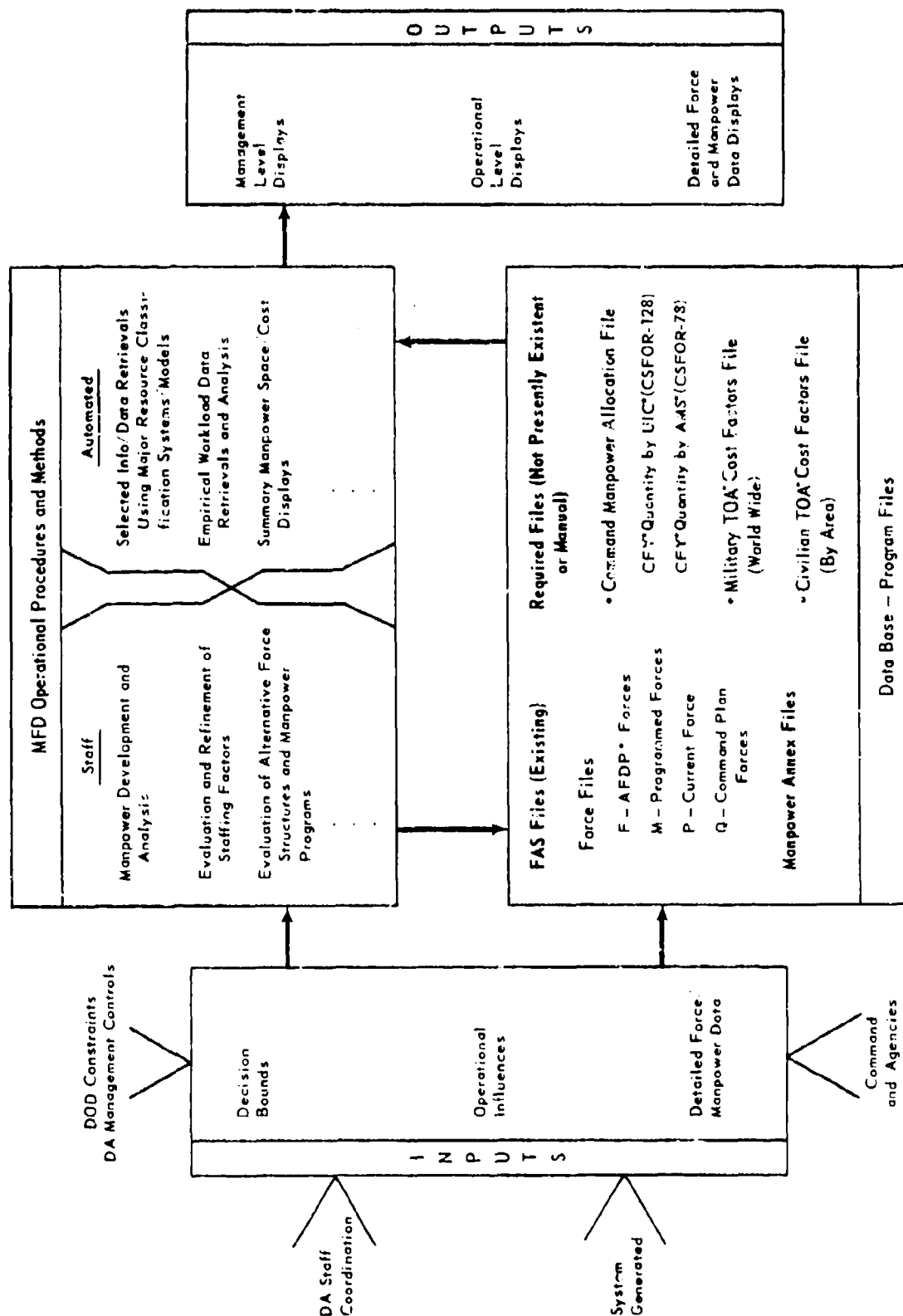


Fig. 4-2—Functional Relations within Manpower and Forces Directorate

*AFDP, Army Force Development Plan; CFY, current fiscal year; AMS, Army Management Structure; UIC, unit identification code.

Three levels of output formats that correspond to the types of data display requirements placed on the MFD are shown. Management displays provide a summarization of force structure and military and civilian manpower program composition using the LFCS, FYDP, FGC, and appropriation or budget resource classification systems. Operational or analytical displays produce aggregated data on selected areas suitable for staff action and/or coordination. Detailed manpower data displays feature unit and function data suitable for detailed staff analysis that would also serve as backup for the more aggregated management and operational displays.

FAS Modules Required under the IMP Methodological Concept

The FAS as presently constituted is fundamentally a data management system in which detailed accounts representing the principal force files are updated to reflect the detailed force and manpower changes that ensue during the course of force structure and manpower program development, budgeting, and management. In this capacity the FAS provides a detailed data interface with updating and user systems depicted in Fig. 4-3.

Although approximately seventy output reports can be generated from the presently configured FAS,²⁶ for the most part their orientation is one of complete data recall with a limited provision for summary reporting, selective data retrievals (the exception being extracts generated for force planners using the recently developed Force Accounting Terminal System [FACTS]), and exception reporting of change transactions used in file updates. The present FAS performs well as the vehicle for integrating data between the FAS Force Files (FORFA) and the numerous interdependent systems shown in Fig. 4-3. At the same time its potential as the central source of force and manpower input to analytical and decision-making processes appears to be virtually untapped.

Under the IMP methodological concept a data systems module, as shown in Fig. 4-3, supplements and to a significant degree supplants the current report-generating functions of the FAS. Output displays would be user oriented and recognize the various combinations of data element content, data aggregation levels, and resource classification systems (LFCS, FYDP, FGC, and AMS) required to satisfy the particular information requirements of individual force and manpower analytical and decision-making activities within the data network shown in Fig. 4-1.

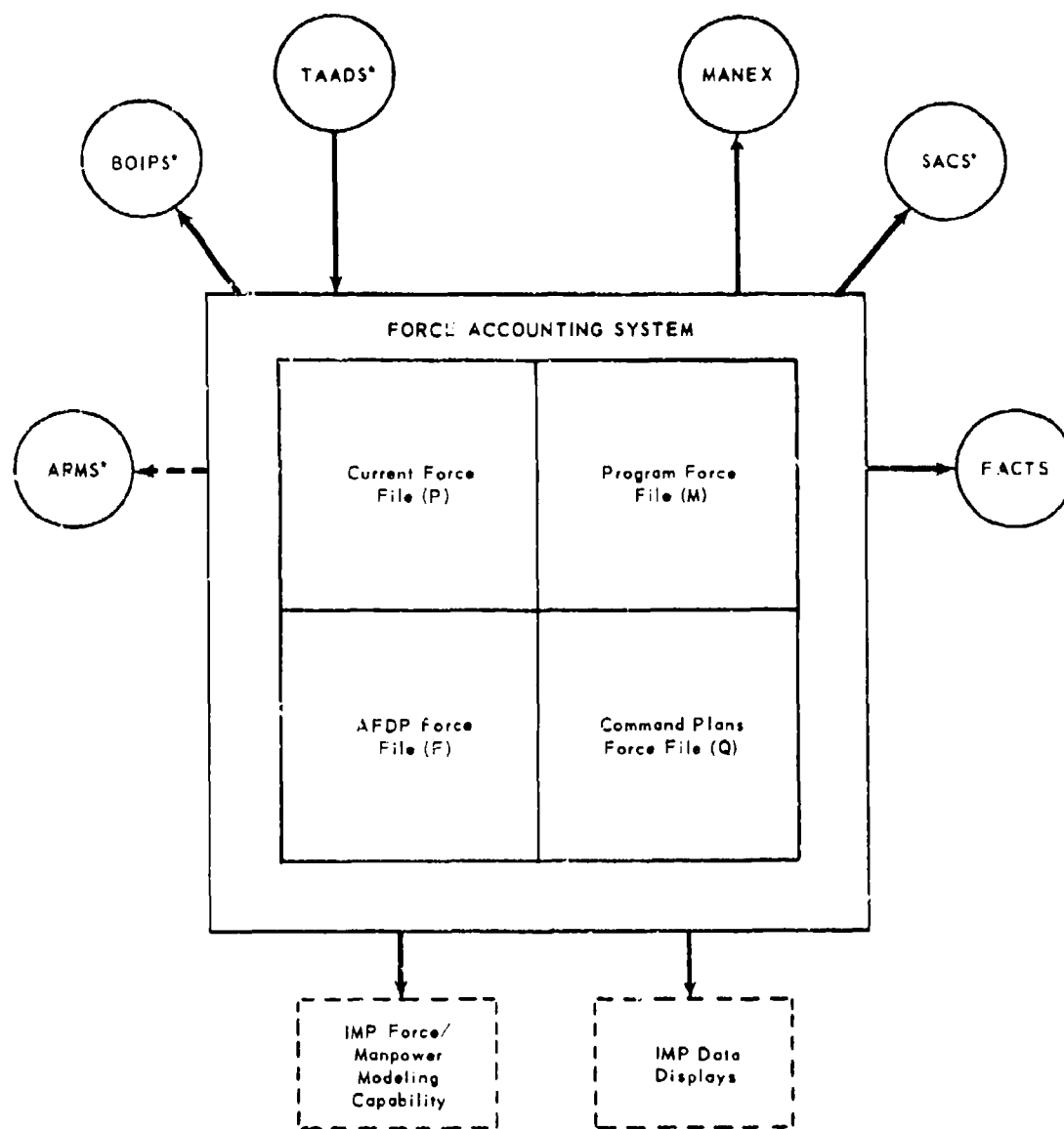


Fig. 4.3—FDMIS Interfacing with the FAS

* ARMS, Army-wide Requirements Model for Support Manpower; BOIPS, Basis of Issue Planning System; TAADS, The Army Authorization Documents System; SACS, Structure and Composition System.

A manpower program modeling module, also depicted in Fig. 4-3, would provide a standardized methodology for evaluating alternative mixes of TOE/TDA manpower on an aggregate level and military and civilian TDA manpower on a detailed functional basis. Such a modeling capability could be extended to support the development of individual manpower programs for major commands and agencies by providing visibility to manpower resources at the command level.

IMPROVED STAFF-ADP OPERATIONAL INTERFACE

General

The analysis in Chap. 3 of the utility of the LFCS as the program classification linkage for integrating military and civilian manpower indicated the requirement for a comprehensive unit-based data element structure and consistently maintained primary data base for manpower programming. Also recognized was the requirement for the reaggregation and translation of military and civilian authorizations derived from the force structure into the code structures and information displays of the other DOD-DA fiscal and budget program classification systems related to the planning, programming, and budgeting (PPBS) cycle. The inferred volume of data handling in these reaggregation operations emphasizes the use of ADP to meet the time constraints and information needs of the programming environment.

By the application of military and civilian manpower cost factors and cost modeling techniques, TOA estimates can be developed and displayed in conjunction with LFCS-structured mission and support manpower specifications or authorizations. This would provide a degree of visibility of both manpower spaces and costs that is not present in the FYDP, Fiscal Guidance Categories (FGC) and appropriations (AMS) program classifications. The translation of military and civilian manpower information from the LFCS structure to the other required classification structures would be accomplished by reaggregation through ADP operations on the unit and manpower data elements of the primary FAS data base from which the LFCS-structured programs were derived. Manpower reaggregations in fiscal and budget program classifications could additionally be processed by automated cost calculation routines to compute and project both detailed and summarized manpower TOA in these classifications. A general scheme for

this approach is depicted in conventional ADP symbology in Fig. 4-4.

The purpose of this section is to develop the role perceived for the FAS—within the context of the FDMIS—in the methodological framework for achieving integrated military and civilian manpower programming.

DA Policy on the FDMIS

CSR 18-11²⁰ states the policy that "the FDMIS provides detailed information concerning the Army's force structure and composition" (underlining supplied). This internal policy directive assigns Assistant Chief of Staff for Force Development (ACSFOR) the responsibility for FDMIS data inputs and outputs, validity, and accuracy. Additionally, all other Army staff agencies are required to "use FDMIS data as the single source of force structure data in support of resource management operations." The review and analysis of current manpower programming system operations (Chap. 2 and App D) indicated that the separate civilian manpower programming path in the PPBS cycle does not conform to this policy in practice at either management, staff, or programming activity levels of the DA. This is so, notwithstanding the designed and potential capabilities of the FAS subsystem to support both military and civilian manpower programming operations with force structure unit manpower data. Findings and tentative conclusions resulting from an analysis of manpower data relations within the FAS are contained in App E.

The following discussion summarizes the salient aspects of the FAS as the primary data element system and data base for integrated manpower programming.

The FAS

The FAS is a comprehensive ADP system for recording, maintaining, and retrieving data necessary to account for and control all units of the active Army and reserve components. It is a multiple force system for storage and retrieval of data on current, programmed, and alternative planning forces in a single data base, and includes organization, unit function, and manpower data. The multiple force system permits simultaneous data updates in all affected force files.*

* Input data to accomplish this key procedure is only partly system generated. For the most part, data update input is a staff-dependent function.

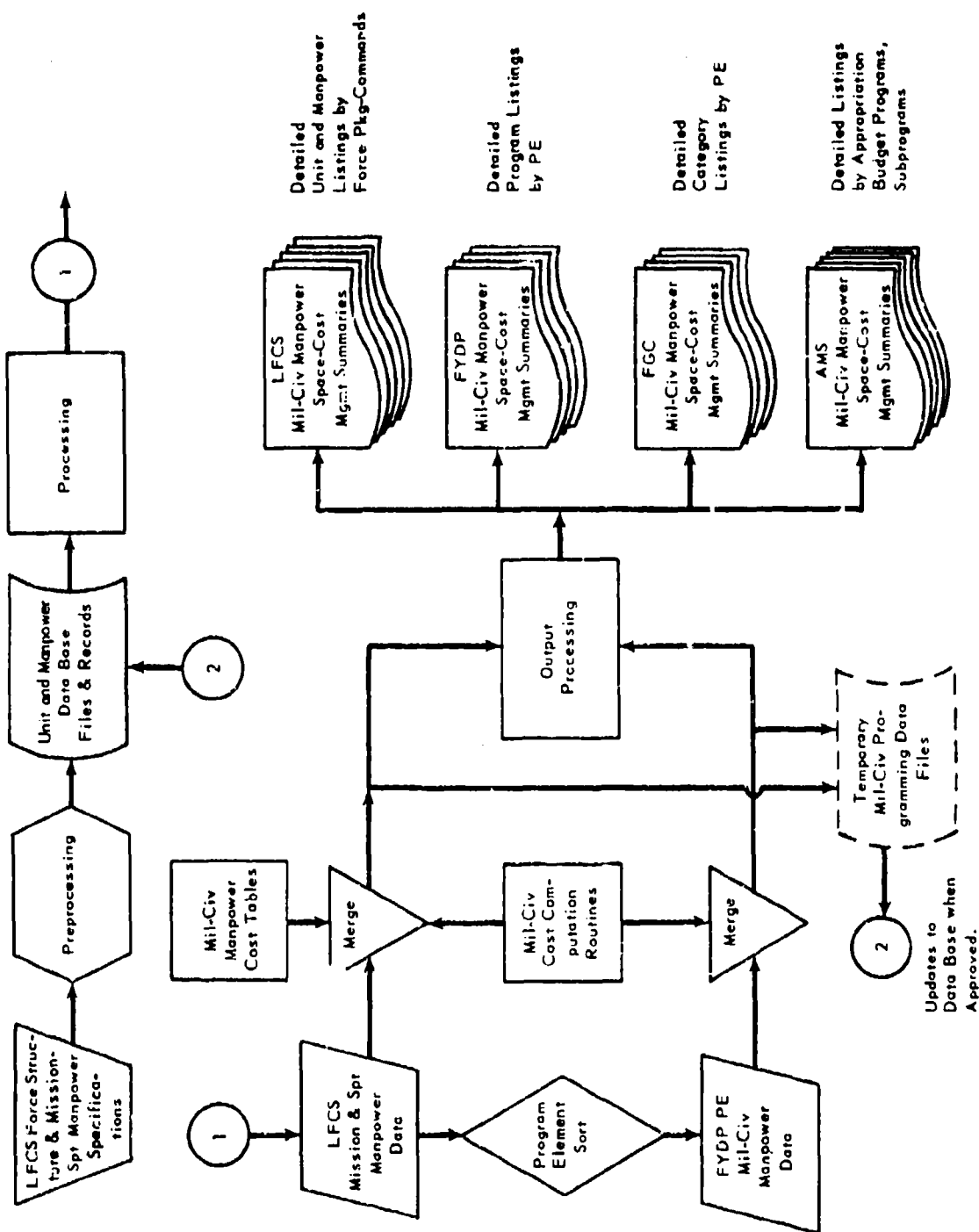


Fig. 4-4—General Scheme for Computer-Produced Military and Civilian Manpower Information and Data

The overall FAS objective is to provide timely information to the DA staff relating to the complete identification, current and projected strength, and deployment of units at the parent unit level in all components of the Army. Principal supporting objectives are:

- Establishment and maintenance of an accurate file of current, programmed, and planned units within the Army's force structure.
- Provision of a continuing historical audit trail for all key unit record changes from activation to inactivation.
- Provision of a data base from which current or projected authorization or organization data for specific units or groupings of units can be retrieved for analysis.
- Provision of a means for selective retrieval for analysis of specific data pertaining to units or groupings of units in the current, programmed, or planned force structure of the Army.
- Maintenance of accountability for Army military and civilian manpower authorizations.
- Accountability for all parent UICs.
- Interface with other Army resource management systems.

FAS Data Base Structure and Data Elements. As indicated by the above, the FAS is a unit-oriented data system. A single computer record contains data associated with a UIC for a particular effective date (EDATE). A total unit record comprises all data elements associated with a UIC. The UIC is the one data element unique to each Army unit—whether current, programmed, or planned. The unit record therefore contains all the elements that describe a TOE or TDA unit as a data module.

Figure 4-5 depicts the major FORFA comprising the unit manpower data base and the update relations between FORFA files and indicates the overall data element code structure of the FORFA unit records with specific reference to the key codes relevant to military and civilian manpower. The complete FAS data element structure of 73 coded elements, with data field descriptions and staff data element pronomeny, is stated in detail in Ref 26.

The permanent FORFA data files shown in Fig. 4-5 are conveniently identified by a code letter or short title. The purpose and content of these files are briefly described as follows.

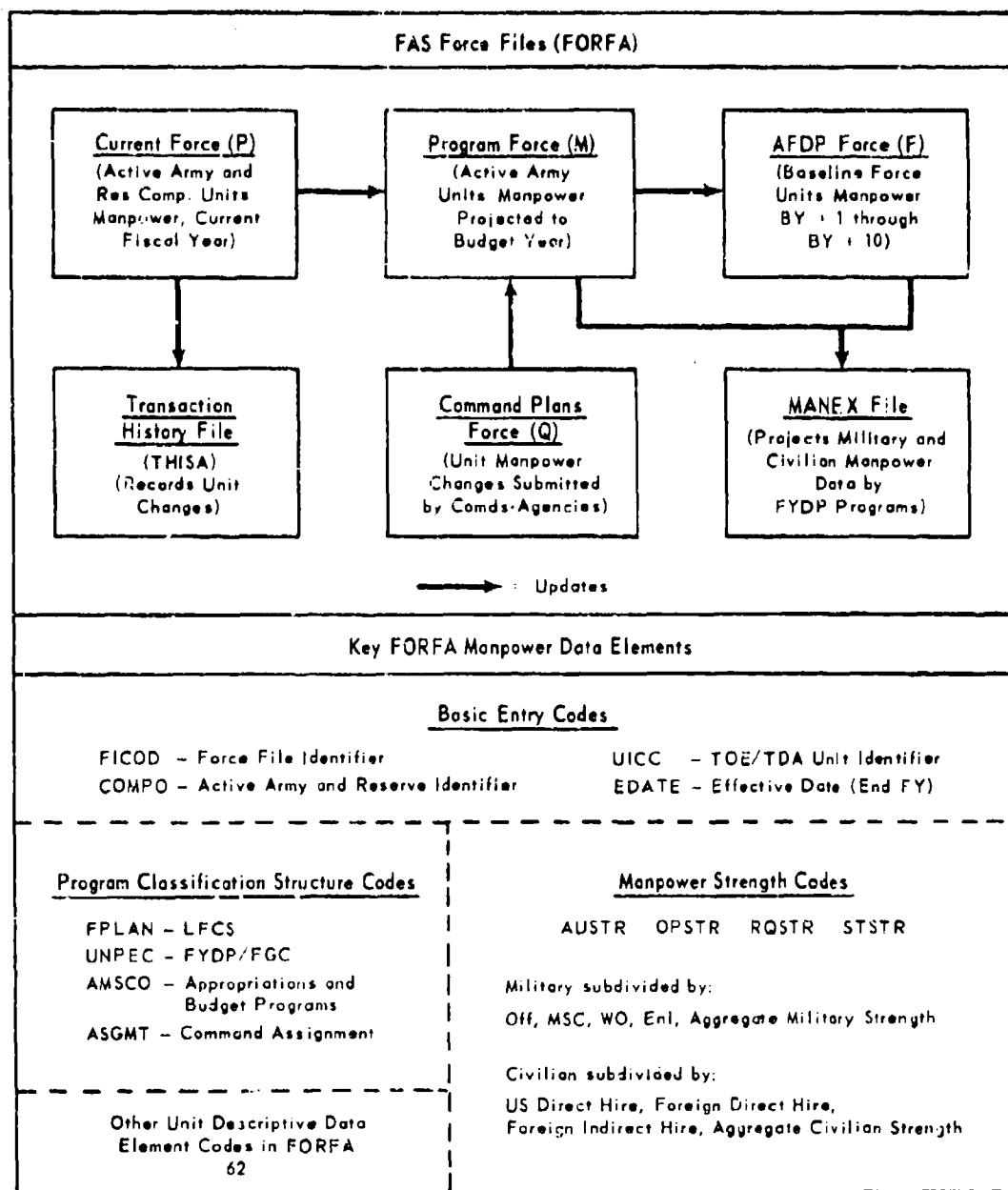


Fig. 4.5—FAS Data Base and Unit-Based Data Elements for Military and Civilian Manpower Programming

Current Force File (P). This file records the current approved Active Army and Reserve component units documented by TAADS, actions by field commands reflected in general orders, and DA instructions to the field. The P force file is the data source for the Quarterly Active Army Troop List, Table of Organization and Equipment Mobilization Troop Basis (TOEMTB), and reports for use by the Army staff.

Program Force File (M). This file records the force structure and manpower authorizations reflecting DA decisions and assumptions relating to the current fiscal year and the budget year active Army. Changes to the M force file may be the result of OSD-DA program or budget decisions, revisions of programming assumptions, approval of unit manpower allocations submitted by field commands, approval of TAADS documents, field general orders, DA instructions, or system interfaces with other FDMIS and DA data systems. In concept the M force file is continuously updated and should therefore constitute the programmed force structure and military and civilian manpower authorizations of the active Army. Because of its relation to the current fiscal year active Army force structure and manpower by UIC association, the M force file has pivotal significance as a conveyance of both inheritance and change to the structure and manpower composition of the Army for which budget authorization is to be sought. It should also transmit unit manpower inheritance to the force structure planned beyond the budget year period. Moreover the M force file is the basis for the manpower annexes of periodic program and budget guidance and the budget year Army Force Program (AFP: AFDP-Vol II) troop lists and Troop Actions Book (TAB). It also provides inputs to the major FDMIS subsystem that provides authorizations data to other Army staff agencies for resource management—the SACS.

AFDP File (F). This file records and displays the base-line force used in the force planning process, as reflected in AFDP-Vol I. The F file projects the force structure manpower for the budget year + 1 to budget year + 10. For planning use, alternative forces may be added to the F file as required.

THISA. This file records sequential transaction changes to key data elements in the P file on a fiscal year basis, permitting audit trail extracts pertaining to units or groupings of units, manpower

strengths, and organization during specific time periods. The THISA provides an important means of empirical manpower trend analysis relative to force structure units.

Command Plans Force File (Q). This file records unit manpower allocation plans submitted by field commands and agencies in response to DA program and budget guidance. The Q file is basically a suspense file of pending actions affecting current and budget year active Army units and military and civilian manpower. As DA approval of command plans occurs, the Q file provides a basis of change to the programming assumptions in the M force file unit manpower allocations.

MANEX File. This is a data extract file of detailed military and civilian manpower data in FYDP program element sequence. The current and budget year data are based on the M force file and out-year data are from the F file. The MANEX output is a massive data "dump" of all military and civilian manpower strengths and authorizations at unit program element code (UNPEC) level within each UIC, both TOE and TDA, as carried in the FAS. The MANEX output does not produce the military and civilian manpower annexes to the FYDP (maintained by the Comptroller of the Army [COA] and Finance and Comptroller Information Systems Command [FINCISCOM]). Rather, it is manually processed by ACSFOR military and civilian manpower programming activities to produce detailed manpower changes in program elements in hand-coded form as inputs to the COA FYDP system.

Other FORFA Files. Not shown in Fig. 4-5 are the Temporary Forces File and the Notes File. As indicated by their names, these files are for the support of force and requirements planning and force structure computational activities.

The key FORFA data element codes shown in Fig. 4-5 are contained in each unit record in the FORFA data base, with the exception that the strength codes and authorizations subdivisions for civilian manpower are carried only in the records for TDA units. By use of these specific codes all the essential data elements are available for the integrated development, projection, and display of military and civilian manpower in macro-intermediate-micro levels of information summaries or data detail in LFCS force structure relations for use at management-programming activity levels (see Fig. 3-1). By automated sorting based on TOE or TDA unit

descriptive codes, the quantitative proportional relationships between TOE authorizations and TDA authorizations (generalized in Fig. 3-2) can also be produced in the appropriate level of detail for each LFCS category or force package or by command distribution. This will afford both DA management levels and manpower planning and programming activities the prerequisite visibility of military and civilian manpower allocations and force structure balance for analysis and decisions.

By means of the multiprogramming capability of the third-generation computer system supporting the FAS, these key data elements in FORFA unit records could be sorted, reaggregated, and summarized to present military and civilian authorizations and strength data in the program element code structure and formats of the FYDP, FGC, and AMS appropriations and budget classifications (see Fig. 4-4).

The FAS in Integrated Manpower Programming

Problem Areas. Despite the designed capabilities of the FAS, comprehensiveness of the data base files, and data element structure available, two significant problems require resolution in order to permit the FAS to be used to its full potential for integrated manpower programming.

Staff-System Interdependency. Existing policy concerning the ACSFOR FDMIS needs stringent management enforcement with respect to the FAS at all levels of the MFD organizational elements participating in the PPBS cycle. At these levels recognition is required that the successful defense and acceptability of manpower programs and related budget submissions may be directly influenced by the consistency and credibility of the source data on which PPBS activities and outputs are based. The foregoing requires understanding by programming staff elements of their responsibility for continuous intensive management and control of the input necessary to maintain the FAS as the primary data source in all phases of the PPBS cycle. As indicated in Fig. 4-5 the FAS FORFA files are interdependent. The content of the data elements in the FAS unit records that support these files is a direct function of a variety of information received or developed by staff elements during planning, programming, or program analysis. All MFD staff elements must continuously analyze and reduce pertinent information to data element form for entry into the FAS files and unit records in order that the FAS automated

update procedures can be effective. The ACSFOR management objective should be to require that all staff manpower planning-programming elements involved in the PPBS process operate from a single consistent data source from which all detailed program data and higher levels of management information can be derived and related in any required program classification structure. Attainment of this objective requires a continuing internal program of indoctrination and training of ACSFOR staff personnel and supervisors in the major role of the FAS, of its capabilities, and in their individual and organizational responsibilities for the maintenance and use of the FAS as the primary PPBS military force structure and the civilian manpower data source. Staff personnel must be indoctrinated with the principle that force manpower planning, programming, and program control—although discrete functions organizationally—are a synergistic, coherent process of interaction between the staff and the data system and between inputs and outputs.

System Responsiveness and Augmentation. The corollary of the above is the need for enhanced responsiveness, flexibility, and accessibility of the FAS to the ACSFOR MFD staff planning and programming activities. Because of its automated environment, the FAS is subject to a high degree of technical control and management at both the computer facility level and within the MFD organization. Technical system management is necessary to economy of costly computer operations and control of system workload, and to preclude system saturation. However, it should not operate to create unnecessary buffering on either the input or output side of staff operations or to preclude a state of mutual purpose and objectives in staff-system relations.

On the input side, FAS management activities and expertise should be oriented toward the most positive and efficient means and procedures for facilitating staff-system interaction. An example would be developing the routine use of direct access remote devices by designated MFD staff proponents of FORFA files and data elements as a means of expediting file update inputs.

On the output side, realization of the full potential of the FAS data base for system responsiveness will require system expansion and augmentation. As indicated by the earlier cited FAS system objectives,

the FAS is a comprehensive and detailed data accounting system. The system logic and standard program library is oriented toward the detailed data output level. When produced in tape or other computer media, some of these detailed data retrievals provide the required data input to the other automated FDMIS systems or DA data systems with which FAS interfaces. However, when these standard retrievals are produced as printout reports for staff use, they represent voluminous data "dumps" that may run to hundreds of pages of machine listings. The volume of detail in these FAS outputs may be of import and use by MFD staff elements for detailed programming (otherwise the report requirement should be abolished). However, this voluminous data detail must be manually processed by MFD staff elements to produce management level information summaries. To eliminate these time-consuming error-potential procedures the FAS requires augmented system logic and programs designed to produce management level military and civilian information summaries of detailed data retrievals, particularly in the LFCS and other program classification structures applicable in the PPBS cycle.

Additional Automated Data Files Required under the IMP Concept

Implementation of the Vertical TAADS. At the present time detailed unit and manpower space adjustments made by commands are not reflected in the FORFA P (current force) file on a timely basis. Since the current force provides the starting point for force and manpower programming and planning actions it must accurately reflect the existing unit composition and manpower space distributions in the field. The quarterly CSFOR-128 submissions serve as the present data source for command and agency TOE/TDA distribution down to UIC level for current year bulk military and civilian spaces allocated by Manpower Vouchers. TAADS is undergoing redesign in order to furnish field-initiated TOE/TDA manpower space distributions to HQ DA on an automated basis. When these system modifications are implemented, direct command TAADS updates to the FORFA P file should also be reflected in the FORFA M and F files to insure that programming and planning adjustments to the current force are done from a common base.

CSFOR-78 Data Interface with Force and Manpower Planning Models.

The CSFOR-78 command submissions that reflect current manpower distributions by functional association as well as dollar costs have been in

existence under OACSFOR cognizance since at least December 1966. The empirical military and civilian functional workload data and civilian cost data resulting from the CSFOR-78 reporting system would seem to be of considerable importance in Program Development Division (PDD) manpower programming as a current source of actual and historical workload factors by AMS coded functions. CSFOR-78 is submitted in automated form by most commands but is manually maintained at DA level. (However, action is under way for total automation of Part A of this report.) An automated CSFOR-78 capability in the FMIS-FAS system environment would provide a readily available and responsive source of important manpower programming factors for integration into staff manpower programming procedures. One very apparent application for the historical CSFOR-78 workload input factors would be a data analysis program to provide workload, staffing, and cost factors to an improved ARMS model under varying user parameters in order to examine the military and civilian support manpower and TOA implications of alternative force structures or changes.

Development of Automated Manpower Cost Data Base. An automated civilian and military manpower cost table should be developed for interface with existing and envisioned force and manpower planning models. Such a cost table would include average man-year TOA factors for military and civilian manpower categories and also incorporate pay raise or inflation adjustments and projected budget year and successive out year costs. As shown in Fig. 4-6, civilian manpower categories would be costed by geographic area in contrast to officer and enlisted cost factors, which remain constant owing to the nature of the standard military compensation structure for military personnel, Army (MPA).

Costing of alternative force structures and mixes of military and civilian tables of distribution and allowances (TDA) support manpower could be accomplished by affixing the appropriate manpower cost codes to each TDA record in the FORFA files. Summary displays correlating manpower spaces to costs similar to several of the IMP illustrative formats in App E could be generated by a roll-up of space and cost totals into the various resource classification structures (i.e., LFCS, FYDP, FCC, and AMS).

MANPOWER CATEGORIES		OUT YEARS									
		BUDGET YEAR									
		CURRENT YEAR									
Officer	X										
Enlisted	X										
Direct Hire US		X	X	X	X	X	X	X	X	X	X
Direct Hire Foreign National		X	X	X	X	X	X	X	X	X	X
Indirect Hire		X	X	X	X	X	X	X	X	X	X
	World Wide	CONUS	Europe	Vietnam							Pacific
		Geographic Regions									

Fig. 4.6—Military and Civilian Manpower Cost Factors

OUTPUT DISPLAYS

General

The implementation of a systematic methodology for determining Army manpower authorizations and achieving integrated military and civilian manpower programming depends largely on the availability of appropriate manpower information displays at crucial points of analysis, coordination, decision, and review during the Army manpower PPBS cycle. The inability to correlate civilian manpower with the force structure has been identified as one of the major deficiencies of the current manpower planning and programming system.

Under the IMP approach early and consistent visibility of the military and civilian space-cost mix in the force structure would be maintained throughout the various management decision-review points. The basic IMP conceptual display for providing such information features an integrated military and civilian manpower space and TOA summary, structured by LFCS categories for military TOE manpower and military and civilian TDA manpower and projected costs. Detailed displays of such a structure would allow TOE and TDA and military and civilian trade-off studies to be made in light of force structure composition and manpower cost implications from initiation of program development through budget formulation.

The data element structure from which integrated military and civilian displays would be developed would be UIC-UNPEC based to afford the necessary crosswalks and intermediate levels of reaggregation to the other prescribed program classification systems (i.e., FGC, FYDP, AMS) from the LFCS structure. Although initial military and civilian manpower program compilation would be LFCS oriented, the capability would reside with the system to assemble manpower space and TOA data by the various program classification systems at detailed, intermediate, and aggregate display levels.

Three levels of information usage and needs were earlier identified. These are:

- Information required for detailed unit, PE, and budget function analysis and alternation of the force structure and military and civilian manpower programs.

— Information necessary to support analysis of alternative compositions of manpower programs from the varying perspectives of individual command space authorizations, major resource program classification systems (FYDP, FGC, AMS), mission program vs support program manpower authorizations, and military support manpower authorizations relative to civilian support manpower authorizations.

— Information summarizing Army force structure and manpower program recommendations suitable for display to high level decision makers.

Sample IMP Output Displays

Several illustrative IMP display formats are included in App E to indicate the range of report structures and data information aggregations possible under the IMP methodology. These displays are grouped as detailed manpower data listings (A level displays), operational level formats (B level displays), and management level formats (C level displays). Several of the distinguishing characteristics of individual displays are summarized in Table 4-1.

As indicated in the table, manpower aggregations can be expressed in terms of both spaces and estimated costs (TOA). Several displays portray only support manpower spaces and costs to provide visibility to military and civilian tradeoff considerations. Other displays relate military manpower in mission programs to military and civilian manpower in support programs in order to display total manpower allocations relative to the force structure.

Each of the displays represented in Table 4-1 and App E is intended for a particular need and purpose of usage; therefore the stub items, columns, and information content in each display are stylized for the intended use. Such a selectivity of format and data content will cause each display to have a greater relevancy for its user. The sample IMP formats in App E are not intended to satisfy the needs of all potential users of force and manpower information but are presented as examples of the information display possibilities under the IMP methodological concept. They could eventually form the report nucleus of a comprehensive force development and manpower program management information system incorporating both military and civilian manpower. The feasibility of providing such displays on an automated basis is partly confirmed by

Table 4-1
SUMMARY OF IMP ILLUSTRATIVE OUTPUT DISPLAYS

Format	Sort Sequence	Type ^a Spaces	Support Manpower Only	MAGR and CAGR Aggregation ^b	Space aggregation by ^c	Cost aggregation by
A1	1. PE 2. UIC	D, U			UIC	
A2	1. UIC 2. PE	D		X	PE	PE
B1	1. PE 2. UIC	U			UIC	
B2	1. PE 2. UIC	D			UIC	
B3	1. PE 2. FDP	D, U			FPLAN	
B4	1. PE 2. UIC	D, U	X		UIC	UIC
B5	1. PE 2. FDP	D, U	X		FPLAN	FPLAN
B6	1. PE	D, U	X	X	PE	PE
B7	1. UIC	D, U		X		LFCS 1. Strategic planning category 2. General functional mission 3. Location/orientation
B8	1. UIC 2. PE	D, U	X	X	Major FYDP Programs	Major FYDP Programs
B9	1. UIC	D, U	X	X	1. Appropriation Programs 2. Budget Programs 3. Budget Subprograms	1. Appropriation Programs 2. Budget Programs 3. Budget Subprograms
B10	1. UIC 2. PE	D, U		X	FGC	FGC
C1	1. PE	D, U			Major FYDP Program	
C2	1. FDP	D, U		X	LFCS 1. Strategic planning category 2. General functional mission 3. Location/orientation	
C3	1. FDP	D, U		X		LFCS 1. Strategic planning category 2. General functional mission 3. Location/orientation
C4	1. PE	D, U	X		1. Appropriation Programs 2. Budget Programs 3. Budget Subprograms	1. Appropriation Programs 2. Budget Programs 3. Budget Subprograms
C5	1. PE	D, U		X	FGC	FGC

^aD, distributed spaces; U, undistributed spaces (Command Programs).

^bMAGR, aggregation of military totals (spaces and/or costs); CAGR, aggregate of civilian totals.

^cFPLAN, Force Plan Code.

the manual production of these displays by OACSFOR MFD program analysts utilizing manpower data listings originating from the existing FAS-MANEX files.

Based on the approach in Chap. 3, the IMP concept involves the development of an integrated management information system, oriented at the level of users' needs, as contrasted to the present detailed data retrieval orientation. This is illustrated by the flow chart in Fig. 4-7. The FAS-IMP interface is represented at the top of the flow chart in which a UIC work record is constructed from the updated FAS force files with the system user designating the particular FORFA file (P, M, or Q) to be represented. Provision is made for a cost module interface in which codes for specific combinations of civilian manpower categories and geographic locations are updated onto the UIC work record.

The logic flow utilized in developing individual display formats provides an appreciation for the data relations introduced in the system's successive levels of data display, e.g., detailed manpower displays, operational-level displays, and management-level displays and the direct logic and data linkage of all displays with a single UIC work record. Such system integrity assures commonality in information display for all combinations of data structures and aggregations since data are derived from a single source and developed under common and predefined processing logic.

Three pools of UIC records—undistributed manpower, TOE unit, and TDA unit spaces—are created from the UIC work record and processed individually and in varying combinations to produce the display formats shown. Through a series of extracts, sorts, and space and cost aggregations, all or selected reports can be printed. Extracts are accomplished through a series of assembly tables that provide the data permitting translations between the FYDP, FGC, AMS, and LFCS data classification systems. Sorts enable manpower space and cost totals to be sequenced in the order of stub items appearing in the displays. Aggregation routines provide totals and subtotals associated with stub items and are also used to accumulate total military and civilian manpower aggregations from the five individual categories of manpower.

Cost code totals are accumulated and applied against a cost table containing military costs by manpower category and civilian cost by category and geographical location. This process could occur in a separate cost calculating routine or be incorporated into the logic shown at a point just prior to report generation.

INPUTS

General

The previous classification of levels of data flow throughout the HQ D. manpower planning and programming process also provides a method for categorizing inputs entering the system. These inputs, grouped as decision bounds, operational influences, and detailed force manpower data entries, retain virtually the same role in the manpower program development process under the IMP methodological concept, since the IMP Phase I study objective assumes no change in DOD management and control of the process. Therefore present DOD decision bounds and the DA guidance to the Army staff for adherence to these decision bounds are considered under the IMP methodological concept to remain unchanged. A second reason, as discussed in the general approach in Chap. 3, is that the data elements required to support integrated manpower programming are currently available within the FAS or, in the case of data contained in the CSFOR-78 and CSFOR-128 reports, have the potential for automated interface with the FAS. The discussion of inputs to the system will concentrate on their particular impact on the IMP methodology. A more extensive treatment of their interrelations with the Army program development process is contained in App C.

Decision Bounds

The system receives decision bounds from DOD-DA management levels in the form of guidance, policy directives, and explicit instructions governing force structure and manpower program planning and development.

DOD Force Specifications and Manpower End Strengths. In the past, initial DOD influences on force specification and manpower end strengths were provided in the detailed DOD staff document, "Illustrative Force and Resource Annex,"³² which preceded the issuance of the OSD Fiscal Guidance Memorandum (FGM). Included in this volume were numerous tables depicting

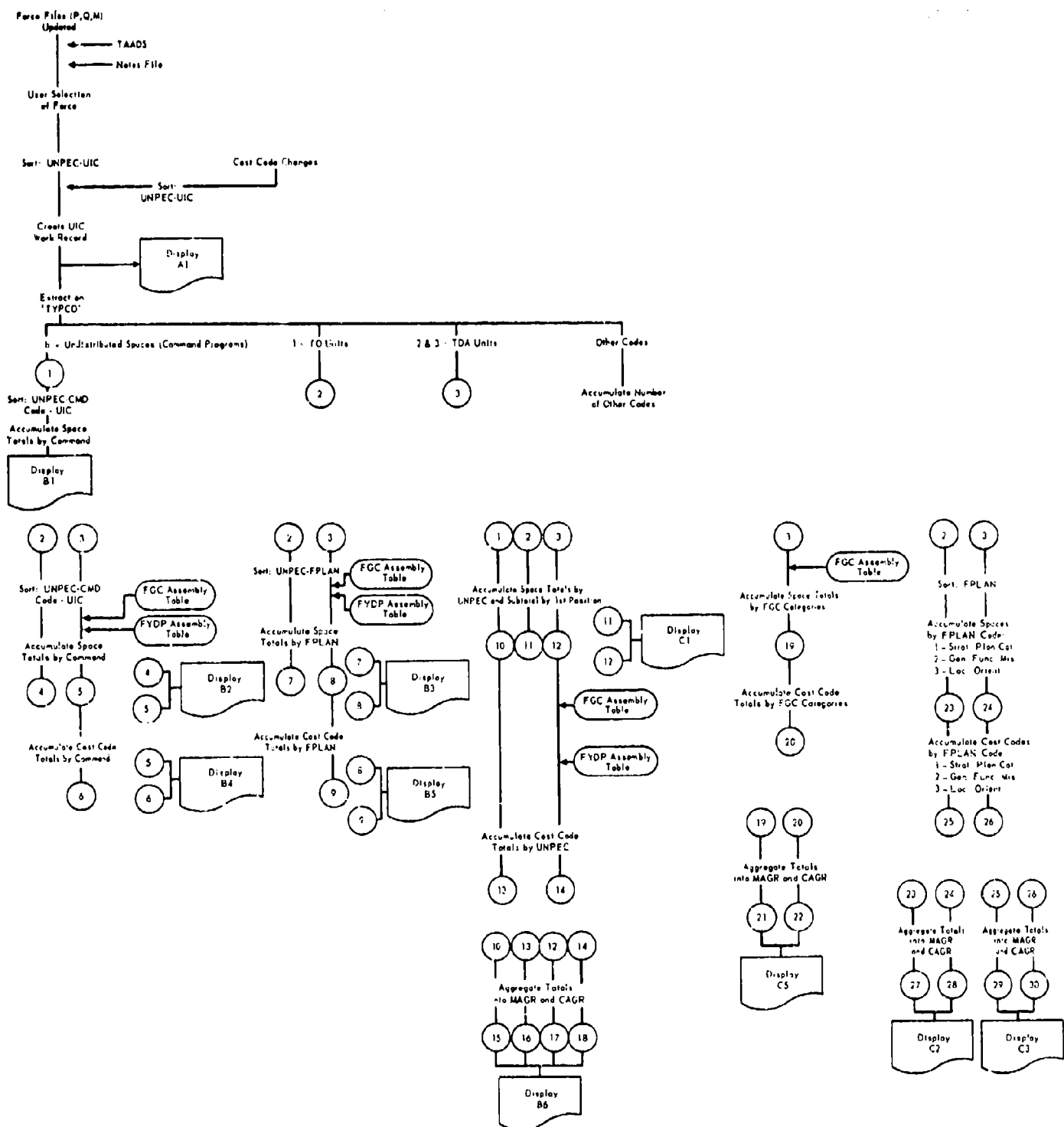
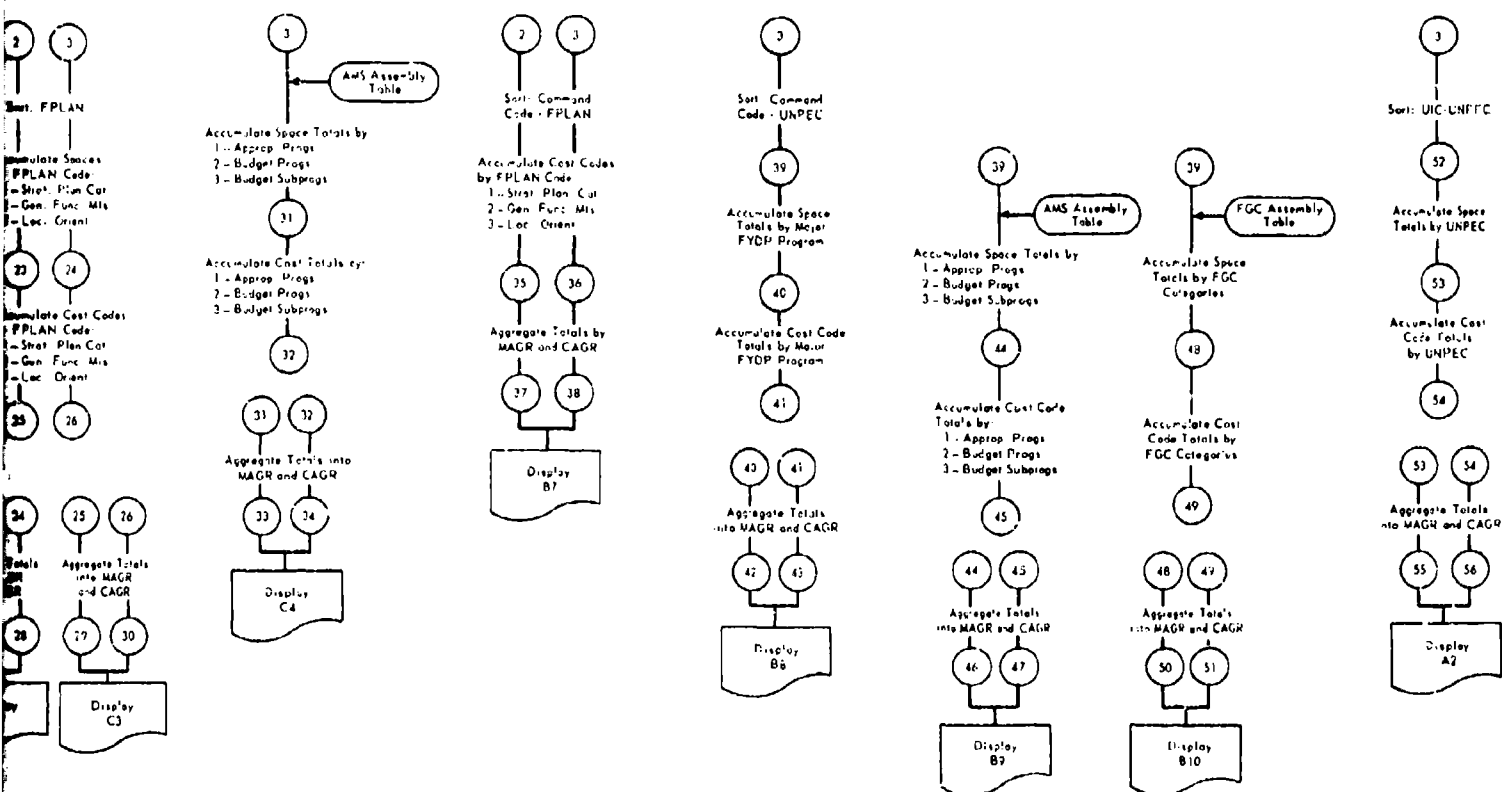


Fig. 4-7—Report Generation Logic for IMP



Operation Logic for IMP Illustrative Displays

Army force structures, military and civilian manpower, and associated TOA distributed and translated in various categories and functions. Under the IMP methodological concept, these types of DOD prescribed force specifications, manpower end strength, and TOA restrictions could be entered as parameters for a simulation of the current year force structure and military and civilian manpower programs that would indicate the impact of OSD constraints in the form of overages and shortages of TOE/TDA units, civilian and military manpower spaces, and TOA. Model output displays could be reformatted into the various resource classification systems to focus on the varied implications of OSD recommended force and resource restrictions. A summary LFCS display would indicate the capabilities of the resulting force structure to perform its overall missions as well as the proportional mix of combat, combat support, and combat service support units and military and civilian manpower required to "balance" the force.

Summary FYDP, FGC, and AMS displays, also indicating shortages and overages to the base-line force, would complement the LFCS summary display in accounting for the actual allocations of manpower spaces and TOA to support the force structure.

Such a force structure manpower program modelling capability would enable more detailed analysis of OSD's recommended resource constraints and their attendant computational methods and factors from the joint perspective of force structure capability and resource availability. Proposed DA modifications to DOD force specifications and manpower end strengths could then be supported by summary LFCS, FYDP, FGC, and appropriation budget displays, together with a description of the DA computational methods and factors from which they were derived.

OSD Constrained Resource Allocations. The OSD FGM provides a policy directive to DA for Program Objective Memorandum (POM) development and explicit instructions governing the application of the fiscal guidance tables contained in the document. The common format of the fiscal guidance tables (see App C) establishes categories of forces, missions, and costs to which funding allocations are assigned for each Service and Defense agency where appropriate. To comply with OSD-directed fiscal constraints and evaluate their impact relative to manpower program composition and FYDP-AMS classification allocations, a force work file

could be constructed from the FAS Program Force (M) File arrayed in FCC terms with fiscal ceilings imposed in appropriate categories. The imposition of OSD fences on certain fiscal categories would also require that compensatory adjustments be made within the remaining categories at the time the current force is structured in FCC. A subsequent restructuring of the force manpower in the LFCS and classifications could enable further impact analysis to be made on the effect of the fences on the force structure and related military and civilian manpower and serve as the basis for development of the Army alternative to the base case in the POM.

Periodic OSD Force Structure and Unit Composition Decisions. There is a continuous flow of "decisions in detail" during the Program Development Phase and PBDs during the Program Budget Formulation Phase that affect the current year and budget year force and manpower programs. These numerous decisions are reflected in several components of the program budgeting systems; for instance, in the volume of changes required in the periodic updates of the FYDP and Program and Budget Guidance (PBG) manpower annexes, the changes occurring between the submission and approval of the POM programs and subsequent budget program formulation, the Army Force Program (AFP) troop list revisions, and the changes summarized in the quarterly manpower vouchers. All the foregoing occur at different times in the program budget cycle and each affects the other. All such changes affecting the current and budget year force composition and manpower programs should be reflected in the FAS P and M Force Files in order that current and consistent force manpower data are always available.

AVCSA-PGRC Translation of DA Guidance and Decisions. Input from the DA management level into the force structure and manpower program development process provides a translation and disaggregation of the OSD FGM into more specific and finite terms (see Fig. 2-1). The AVCSA-PGRC vehicle for converting Secretariat guidance and decisions to the Army staff is a standardized force structure account display format. (App C contains table layout and description).

At Army staff level (OACSFOR MFD) quantitative DA-AVCSA-PGRC resource constraints in the form of size and composition of force categories, man-

power strength, and "TOA floors" could be evaluated using separate FAS work files created from the always current M Force File. Each of the POM cases could be displayed in both LFCS and AMS Budget Structures with constraints entered for the appropriate resource classification system associated with each POM case. An iterative process of allocating the remaining manpower strengths and TOA to unfenced LFCS and AMS categories could then occur. With each cycle of reallocating the remaining manpower and TOA resources to unfenced categories, detailed LFCS and AMS displays could be produced, effects on individual categories could be analyzed, and adjustments could be made and displayed in an LFCS and AMS summary level of detail.

Operational Influences

Numerous factors interact at the force structure and manpower program analysis level that serve to pattern the process by which the force structure and manpower programs are developed. One critical influence that pervades the entire process is the time constraint allotted to react to each new input introduced into the system. (Specific time constraints are discussed in App C). Also affecting the nature and intensity of staff analytical workload are certain operational parameters defining the scope of analytical tasks accomplished during the process which are reflected, in part, by the time determinants associated with several of the resulting documents, AFDP-I (BY + 1 through BY + 12), POM (BY through BY + 4) and FYDP (CFY, BY through BY + 4). Other operational determinants are the number of force and manpower program alternatives to be developed—as with the base, alternative, and decremented cases required for the FY72 and FY73 POM submissions and the format of force structure and manpower program tables required to display, support, and defend the Army POM submission.

Staff actions provide a different form of operational influence. Although such actions are both numerous and frequent throughout the PPBS process, several have significant impact to the system and particular relevance to the IMP Methodological concept.

Programming Assumptions. Currently, worldwide LFCS allocation of TOE/TDA units and related aggregative military manpower requirements commences early in the planning phase of the PPBS cycle, with the initial

allocation of civilian manpower beginning during the POM program development phase following the resource allocation decision by high echelon DA management levels. These tentative military and civilian manpower program space authorizations are viewed as programming assumptions (discussed in App C) until actual command distribution of DA manpower allocations is received following the PBG. Programmed assumptions are not intended to reflect actual manpower distributions in the field. Rather they are used to maintain a force structure that reflects manpower decisions while they are in the process of implementation. Under present MFD procedures the majority of military manpower programming assumptions are distributed to individual units. In some cases spaces are distributed only to program element level in carrier units or command programs. Civilian manpower programming assumptions are all represented through command program entries, reflecting again the differing approaches for programming military and civilian manpower.

The CSFOR-128 command submission, detailing command distribution of current year bulk military and civilian spaces allocated by manpower voucher, offers a means for reducing the number of undistributed support military and civilian manpower spaces carried at present in command programs.* By providing a timely update of the FORFA P (Current force) file using automated CSFOR-128 data, the FORFA M (Program force) and MANEX files could subsequently be updated resulting in a substantial reduction in undistributed spaces reflected in all files. The result would provide a more precise representation of actual command manpower distributions for both detailed and aggregate information displays used by staff manpower analysts in monitoring the current force and developing the budget year force.

Staffing and Work Load Factors. Manpower staffing factors are developed by Utilization and Standards Division, MFD, ACSFOR from manpower and work load data furnished in the Utilization and Requirements Report, CSFOR-78, and other supplementary data. These factors are calculated for

* It should be noted that the majority of the space recoveries via the CSFOR-78 would represent unprogrammed CV actions. Many of the undistributed spaces are earmarked and not automatically available for reduction.

each major command or grouping of major commands for each applicable AMS account. Staffing factors are used in determining civilian manpower requirements to support alternative force structures in AFDP-I planning preceding the program development phase of the PPBS cycle. Military staffing factors are also developed and can be applied to military manpower requirements for TDA activities. Monthly workload data obtained from the CSFOR-78 submissions are used to develop staffing factors for the ARMS Model. This model is used in manpower planning for computing the civilian manpower support requirements as a linear function of the total military manpower strengths supported. For a typical ARMS run the force supported would be obtained from force structures maintained in the FORFA F (AFDP) File.

Numerous runs of the ARMS Model are made for MFD-FDP to ascertain the civilian manpower support requirements for alternative force structure under consideration. Effort is currently being made within MFD to integrate the ARMS Model with the FAS, which will not only improve response time but enable military and civilian manpower support requirements to be considered concurrent with modifications to the force structure made by force planners within MF-FDP.

Manpower Cost Factors. Both military and civilian manpower costs are developed manually. The Office of the Deputy Chief of Staff for Personnel (ODCSPER) is provided a military manpower trained strength breakout by Military Programs Branch, PDD (PDMP) from which MPA costs are calculated. Civilian costs are calculated by Civilian Programs Branch, PDD (PDGP) for all applicable budgets and subprograms. Military manpower cost computation is a relatively straightforward uncomplicated process with average officer and enlisted salary costs and allowances being applied to military end strengths. Civilian manpower costing, on the other hand, must consider separately programs and subprograms for some 145 PE codes, broken down by civilian manpower categories, salary classifications, and geographical locations. Civilian manpower costing is a time-consuming process when performed under the present repetitive manual process.

The capability for comparative cost-based tradeoffs between military and civilian manpower is necessary for achieving integrated manpower

programming. Such comparative analysis should logically occur during the force planning phase so that military and civilian tradeoff considerations are incorporated into the force structure and manpower totals submitted with the POM.

Detailed Manpower Data

Data bases maintained in support of HQ DA and command and agency resource PPES activities are kept current through detailed data exchanges of manpower spaces and costs. Principal data channels are represented by FYDP data updates between MFD PDD and COA; FAS updates enabling command and agency unit manpower adjustments to be reflected in the FAS Current Program, and AFDP FORFA Files and MANEX File maintained for MFD; ACSFOR FAS data exchanged with Deputy Chief of Staff for Personnel (DCSPER), Deputy Chief of Staff for Military Operations (DCSOPS), and Deputy Chief of Staff for Logistics (DCSLOG) ADP systems; and internal OACSFOR-MFD data exchanges between FORFA files reflecting DA-level changes with regard to planning, programming, and managing of the force structures and manpower programs.

Under the IMP methodological concept, several systems adjustments are required, including those necessary to provide an improved data interface capability among existing files. Although the system capability exists for direct automated data interface among the FORFA Files, there is a need for increased synchronization among the files. Logically, any unit or manpower adjustments to the current force (P Force) would affect the programming of manpower for the projected Budget Year Force (M Force) and possibly impact on Base-line Force units and manpower in BY + 1 to BY + 10 (F Force). The reverse is also true, but to a lesser degree, where anticipated unit manpower programming and planning adjustments should be accounted for in the Current Force File. Since each FORFA File has its own proponent within MFD, communication between various MFD force manpower planning, programming, and program management activities in terms of detailed force composition adjustments is difficult, especially since such adjustments are reflected in complete FAS file dumps, which is both inefficient and time-consuming and could be more feasibly accomplished by direct file updates and supplementary printouts of changes to each file, reflecting the nature, source, and date of change.

Under the IMP concept certain modifications are required to existing detailed manpower data field inputs. Automation of the CSFOR-128 data was previously discussed as a means by which the number of undistributed spaces carried in the FORFA P and M Force Files and MANEX file could be substantially reduced. Such an automated data interface would maintain the FAS on a timely basis with manpower space adjustments as they are made in the field.

The automated CSFOR-78 command submission reflects CY military and civilian manpower by AMS code, function and related workload factors, and civilian dollar costs. Such data if summarized and reformatted could provide workload and staffing factors directly to existing analytical models, such as ARMS, and additional models envisioned under the IMP concept which would consider mission and support and military and civilian tradeoff alternatives in terms of current workload, staffing, and manpower cost factors.

SUMMARY

The IMP-I methodological concept has been portrayed in broad terms so as to indicate the technical and system requirements, refinements, and modular additions to assist in guiding the OACSFOR and RAC efforts to improve the force structure and manpower program development process during the follow-on IMP-II study. Although the IMP-I methodology is necessarily general in nature, it furnishes the necessary framework for overcoming the system deficiencies, discussed elsewhere in the report, which currently impede the integrated programming of military and civilian manpower.

Chapter 5

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

General

The development of manpower authorizations in consonance with the annual Department of Defense Planning, Programming, and Budgeting System (DOD PPBS) cycle is a highly constrained, complex, and fragmented process within HQ DA. The approach to military and civilian manpower programming is predicated on differing bases, data development procedures, program and budget classification structures, and organizational functions and procedures. The revision of the DOD PPBS reinforces the necessity that the allocation pattern of military and civilian manpower be developed and analyzed on an integrated basis at a much earlier point in DA management-program development activity. Existing DA policies, procedures, and organization will require modification to accommodate an integrated manpower programming system. Emphasis on the POM as the major vehicle for manpower program development will be necessary.

Programming System Considerations

The differing approaches for military and civilian authorization development and programming precludes timely cost analyses and tradeoff studies in those areas where the two kinds of manpower may be logically interchangeable within DA policies. This is the result of the lack of visible comparability of the military and civilian space-cost mix within a classification structure uniquely pertinent to the Army, the lag between force and military manpower programming and civilian manpower programming, and the compartmentalization of programming activities.

The above conditions adversely affect the attainment of balanced and equitable manpower allocations to Army missions, commands, and agencies in DA program development under fiscal constraints and contribute to the

difficulties of subsequent budget formulation and rational justification of programs.

Current manpower programming methodologies are based principally on laborious manual procedures, data development, and bookkeeping methods that fail to utilize effectively and efficiently existing computer system capabilities and ADP techniques. This results in heavy staff workloads, extensive manual data handling, voluminous data redundancy, high error potential, and deficient or unresponsive management information at higher levels. The existing automated data element structure, files, and computer capabilities of the ACSFOR FDMIS (FAS) have the potential for supporting an integrated manpower programming system based on the IMP-I approach and concept, with development of improved staff-system interfaces and enhanced system logic design.

OACSFOR Organizational Considerations

The alignment, span of control, and time-phased functions of Office of the Assistant Chief of Staff for Force Development, Manpower and Forces Directorate (OACSFOR-MFD) organizational elements tend to support the differing approaches to manpower programming and the carry-over of past bureaucratic practices in a changed and dynamic programming environment. MFD organizational relations require clearer definition and integration relative to planned, programmed, and current force structures and military and civilian manpower authorizations development and data control.

Potential Problem Areas

The problems that may be associated with adopting the IMP-I general approach and implementing the methodological concept proposed are more likely to be principally of an institutional and management nature, rather than technical. The use of computerized systems and analytical methods not only cuts across established organizational lines but also requires that action-level staff personnel, supervisors, and senior management officials adapt to new knowledge, techniques, and concepts for accomplishing their jobs. Obtaining this attitudinal adaptation implies a continuing in-house training and educational effort that may be time-consuming and costly to develop and sustain while meeting day-to-day workloads. These institutional matters are essentially internal OACSFOR management problems, but may also impinge on other Army staff agencies and higher DA management. Their resolution will be necessary, however, if any

significant change in approach and method is to be obtained over that reflected in current programming system operations.

RECOMMENDATIONS

The following recommendations propose specific areas of effort to be undertaken by OACSFOR and RAC respectively during Phase II of the IMP study (IMP-II), leading to attainment of the overall IMP objective stated in Chap. 1.

Proposed for OACSFOR

OACSFOR, during IMP-II, should

- Initiate action within HQ DA and DOD to achieve consolidation of the multiple program classification systems currently prescribed for programming of Army forces and resources, with the objective of obtaining recognition of the structure of the LFCS as the most suitable classification basis for Army resource requirements and authorizations.

- Undertake management review of DA manpower policies and practices within OACSFOR purview so as to incorporate civilian manpower within the Army force structure on a unit authorization basis—comparable with military manpower—in force structure development and force manpower programming in the DA PPBS cycle.

- Review MFD organizational relations, functions, and responsibilities—to include staff-system interfaces with the FAS—to obtain simplification and consistency of MFD procedures and responsibilities for military and civilian manpower related to planned, programmed, and current force structures. Organizational responsibility for manpower data input-output management and control should be clarified, designating the FAS as the principal source of updated force and manpower data and information in interactive PPBS operations and force and manpower control.

- Begin planning for training and information programs to be instituted for MFD military and civilian staff personnel at all levels on the concept of integrated manpower programming relative to the Army force structure and the interdependency of planned, programmed, and current year force and manpower programs relative to budget year authorizations. These programs should include the capabilities, potential, and utilization of the FAS and supporting US Army Management Systems Support Agency (USAMSSA) computer facilities.

Proposed for RAC

Provided a 2 technical man-year level of effort is funded for IMP-II, RAC should develop the IMP-I general approach and methodological concept in sufficient detail to permit its implementation by OACSFOR and HQ DA, with emphasis on the following major task areas:

- A manpower programming methodology with supporting staff-ADP (automatic data processing) interfaces for obtaining an integrated manpower programming capability. The methodology will include auditable rationale and logic to provide for manpower tradeoffs and projected allocations.

- Display formats specifying data elements and aggregations appropriate to manpower development during the PFB cycle, with supporting programming system logic.

- Systems design specifications to improve the use of existing ACSFOR computerized data sources and programs in support of programming methodology and manpower displays.

RESULTS ANTICIPATED

By means of the coordinated OACSFOR-RAC efforts proposed in the above recommendations, the IMP-II study should result in:

- Efficient and integrated military and civilian manpower development and programming, to include improved allocations and means for the study of tradeoffs in program development.

- Improved methods and rationale for presenting, coordinating, and defending Army manpower authorizations programs within HQ DA, LOD, and higher agencies.

- More effective use of limited Army staff programming resources and existing ADP system capabilities; reduced manual programming workloads and data handling; and more timely, valid and consistent manpower authorizations data and management information for decision making.

Chapter 6

EPILOGUE

The IMP-II study phase was intended, as a follow-on to IMP-I, to develop details of OACSFOR-MFD manpower programming. These details were to be used to substantiate recommendations for changes, pointed out in IMP-I, that would eventually permit substantial improvement in DA manpower programming.

The Research Analysis Corporation (RAC) was directed by the Army to terminate the IMP-II effort after approximately four months because of a Congressionally-imposed reduction in RDT&E funding for RAC. Thus IMP-II could not meet its planned objective. At the point of termination, however, the following tasks were underway.

1. Interviews were being conducted with OACSFOR-MFD and other Army personnel to develop a clear and detailed account of all civilian and military manpower programming assumptions, techniques, modelling systems, and related information.

2. An analysis of the relation among the various DOD and DA resource classification systems was in process.

3. A preliminary evaluation of the present force structure and manpower program modelling capability was underway.

The unanticipated termination of the IMP-II study precludes a thorough analysis of the aforementioned tasks. However, preliminary observations which may be of value in future investigations of the integrated manpower programming area are set forth below. These observations should not be considered as either recommendations or conclusions because the investigations intended under the IMP-II study effort were not completed.

CIVILIAN MANPOWER PROGRAMMING

Civilian manpower programming is currently (Dec 71) performed in OACSFOR-MFD manually by individuals (known as program analysts) in the Troop and Support Programs Branches. These analysts are very experienced in this area of manpower programming. They make extensive use of what can best be described as historical factors and techniques; that is, there is considerable reliance on previous work and previous programs, continuously updated manually as a result of frequent cuts, increases, and transfers of allocations in the many programs. It seems apparent that, with this mode of operation, the development of interfaces with other systems, e.g., the automated military manpower programming systems, would be difficult.

Two observations are made in regard to civilian manpower programming.

a. As an interim measure, the manner in which civilian manpower programming is now accomplished in OACSFOR-MFD should be formally documented. Authors of such a document should become intimately acquainted with the role played by each programmer in the Troop and Support Branches, attempt to eliminate any inconsistencies in the management of individual programs, and describe the process in detail as briefly and simply as possible. The resulting document would serve three immediate purposes. First, it would permit a new DA analyst to gain quickly an understanding of his job and increase his effectiveness as a civilian manpower programmer. Second, it would permit the manager or the user of civilian manpower data to understand better both the process and the information derived from it. Finally, it would aid in the achievement of what is ultimately a desirable goal in this area—the automation of much of the civilian manpower programming activity.

b. For the longer term, civilian manpower programming should be automated to the same degree as is military manpower programming. The use of ADPE would have several benefits. First, the reliance on a few key individuals would be decreased because an automated system of planning could be designed for rapid access and use by less experienced personnel who would not have to rely on previous experience and historical factors. Secondly, because response to questions concerning

civilian manpower programming could be obtained more efficiently, the problem of providing answers no longer of interest because the time required to obtain them exceeded the span of concern would not exist. Thirdly, civilian manpower programmers, relieved of the time-consuming drudgery of routine numerical calculations performed much more efficiently by an automated system, could more effectively apply their talents in the important areas where human decision-making is necessary.

DIALOGUES ON CIVILIAN AND MILITARY MANPOWER PROGRAMMING BETWEEN OSD AND DA

There seems clearly a need to have an understanding with OSD concerning the subject matter of the IMP Study research and objectives. Many of the questions the Army wishes to respond to with an Integrated Manpower Programming System are in response to OSD queries. It is desirable, therefore, to the overall success of an IMP research effort to establish a dialogue between OSD, the Army, and any study group undertaking this effort. Only by such an arrangement can the questions of an Integrated Manpower Programming System be intelligently discussed. Further, only with this dialogue can the matter of the multiplicity of resource classification systems and their possible consolidation be addressed.

It is our observation that the development of an OSD and DA understanding of these (IMP Study) objectives could significantly affect the success of the research effort.

AUTOMATED TRANSLATIONS BETWEEN RESOURCE CLASSIFICATION SYSTEMS

One of the objectives of the IMP-II study was to develop, if possible, a means of automated translation between the FYDP, FGC, AMS, and LFCS structures. Preliminary investigation of this problem indicates that little remains to be done to achieve this objective other than pulling together information which exists, primarily in OACSFOR. There are, it is true, important decisions that must be made in the development of translations between certain program elements. For the most part, however, the effort can be reduced to assembling the diverse attempts that have been made in recent years to resolve the translation problem, to develop a management approach to resolving the overall

problem, and to documenting the assumptions employed in the translations. This seems to be an achievable objective of an IMP Study and one that is highly desirable.

DEVELOPMENT OF A TOTAL FORCE STRUCTURE AND MANPOWER MODELING CAPABILITY

This aspect of the research effort is most ill-defined with respect to implementation. However, it is apparent that all elements exist to develop such a system, and the problem resides primarily in assembling blocks (or modules) of the total system rather than in developing new modelling capability.

A preliminary investigation indicates that all elements exist, ranging from a detailed data base to a high-level management display system. The possible exception is the lack of a satisfactory civilian manpower programming model at the detailed planning level. The technical problem is in assembling the various models that are available into an overall system to provide a total capability.

Appendix A

IMP-I BIBLIOGRAPHY

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<u>Number</u>	<u>Title and Date</u>
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AFDP Vol II (AFP-72; draft outline only and program troop lists)

Appendix B

IMP-I TASK 2 INTERVIEWS AND BRIEFINGS

OACSFOR AGENCIES

Manpower and Forces Directorate (MFD)

Office of the Director, MF
Force Development Plans Div. (FDP)
Force Plans Br. (FP)
Force Structure Br. (FS)
Program Development Div. (PDD)
Troop Programs Br. (TP)
Military Programs Br. (MP)
Civilian Programs Br. (CP)
Utilization and Standards Div. (US)
Manpower Measurement Br. (MM)
(ARM Model)
Command Requirements and
Allocation Div. (CRA)
Force Accounting Div. (FA)
(FAS System Manager)

Organization, Unit Training and Readiness Directorate (OT)

Unit Authorizations Div. (AU)
(TAADS System Manager)

ACSFOR FDMIS BRIEFINGS

Information and Data Systems Office (IDSO)

SACs and supporting systems (TAADS,
FAS, BOIP, TOE, etc.)

US Army Management Systems Support Agency (USAMSSA)

MANEX Files (FYDP)

OTHER HQ DA AGENCIES

Office, ASA (M&RA)

Manpower Div.

Office, ASA (FM)

Program/Budget Office

Office, AVCSA

Program and Financial
Analysis Group (PFAG)

OCA (Asst. Director of Army Budget (Programs))

Military Programs Office
(FYDP Manager)

Appendix C

CONTROLS AND CONSTRAINTS ON ARMY PROGRAM DEVELOPMENT

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GENERAL

The material in this appendix supplements Chap. 2, "Factors Affecting Manpower Programming."

DOD CONTROLS AND CONSTRAINTS

Management Constraints

The Department of Defense Planning, Programming, and Budgeting System (DOD PPBS)—outlined in a following section—is a formal management control system that constrains the development of resource programs by the Army and other Services. Significant changes were made in the DOD PPBS as it operated beginning in calendar year 1970 for the cycle leading up to the authorization requests included in the FY72 Army budget submission. These changes were in policy as well as procedure.

Policy Changes. A DOD official* involved in the PPBS credited a major policy change to the incumbent Office of the Secretary of Defense (OSD) Laird-Packard team philosophy of "participatory management" by the Joint Chiefs of Staff (JCS) and Service Secretaries in program and budget development. "Participatory management" is described as giving the Secretary of Defense good possible choices in alternative ways of getting the most military output within existing constraints. The underlined phrase indicates two important conditions of the DOD management processes. First, the current Administration has reinstalled the practice of assigning fiscal ceilings to the DOD for the development of Defense programs and the ensuing budgets. In turn, DOD subdivides this

*C. G. Nuckols, Asst. Director, Cost Analysis Directorate, Office of the Assistant Secretary of Defense (Systems Analysis) (OASD[SA]), at the Fifth Annual DOD Cost Research Symposium, 24 Mar 70.

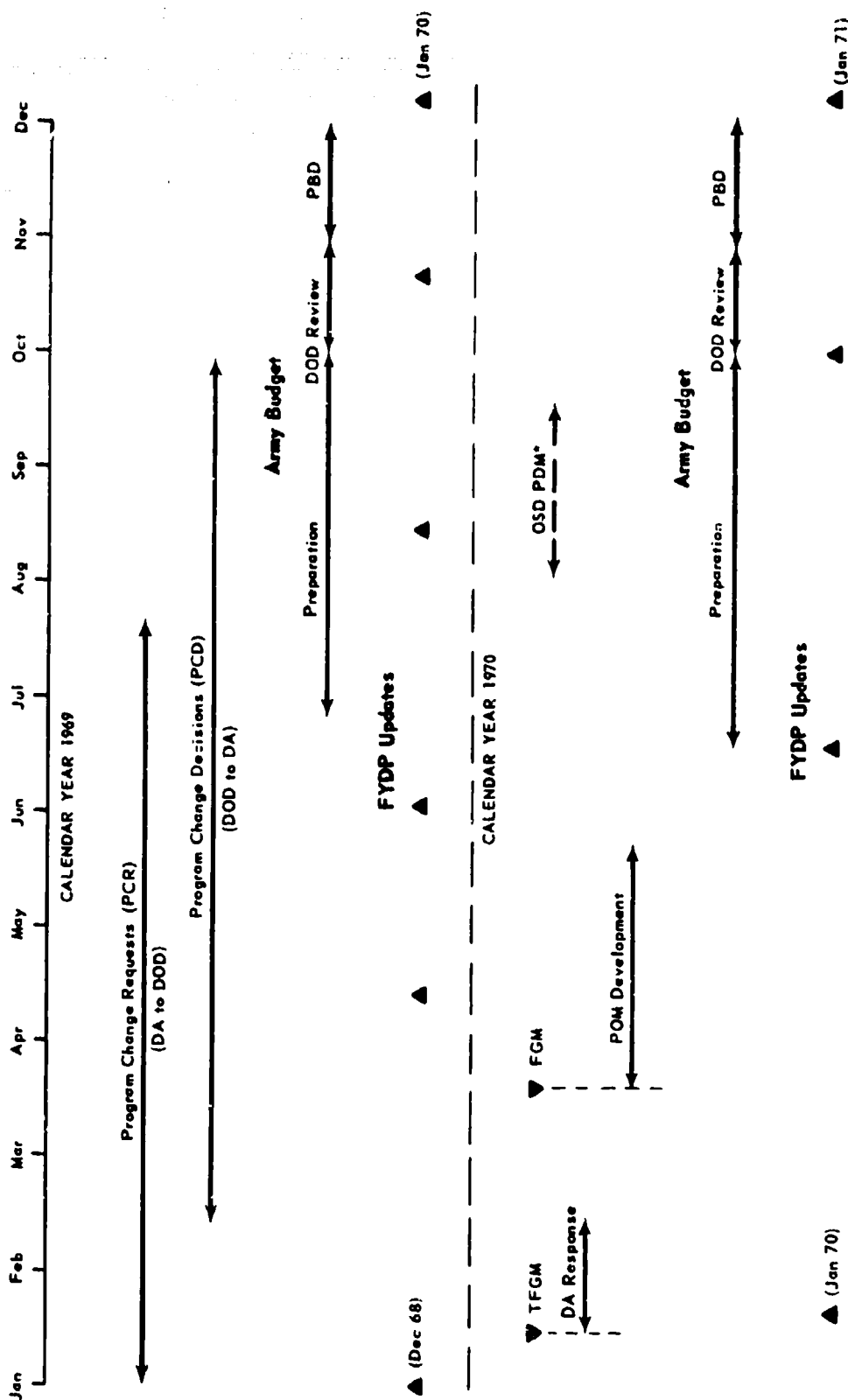
ceiling by allocation to the Army, other Services and Defense agencies based upon the DOD interpretation of national priorities and strategies. This interpretation may be at variance with those of the JCS and the Services. The resulting Service program submissions, however, must conform in detail to these fiscal constraints in a number of ways.

Within the PPBS control network, participatory management appears to consist of formal Service appeals against DOD constraints as these become increasingly rigorous during the annual cycle. These reclusas record the Services' concerns regarding force structure and related resource inadequacies. Most participatory management activities probably occur in channels outside the formal PPBS network. It can only be speculated that such discussions among top management officials of DOD and the Department of the Army (DA) may clarify issues or questions on programs but do little to ameliorate the controls and constraints to which the DA must respond. Thus it would appear that, participatory management in the PPBS notwithstanding, the Office of the Secretary of Defense (OSD) will continue to exercise stringent constraints on all phases of resource authorization programs of the Services. The DOD intent in this regard was indicated by the Assistant Secretary of Defense (Systems Analysis) (ASD[SA]) in early 1970 in commenting on budget pressures on DOD management.*

With the Army being a manpower-oriented Service, and manpower costs representing a substantial portion of its programs and budget, OSD management controls and constraints could possibly become even more onerous in this critical Army resource area. The political sensitivity of Army manpower requirements would contribute to the pressures of such constraints, particularly with regard to the relations of uniformed military manpower and civilian manpower.

As shown in Fig. C-1, previous PPBS program development procedures entailed a stream of detailed individual Program Change Requests (PCR) to the Army portion of the DOD Five-Year Defense Program (FYDP) and corresponding responses from DOD in the form of Program Change Decisions

*Remarks by Dr. Gardiner Tucker, (ASD)(SA), at the Fifth annual DOD Cost Symposium, 24 Mar 70.



*Principal PDM for Army FY72-76 POM directed use of Army Alternative Program for FY72 budget preparation.

Fig. C-1—Major Differences in PPBS Procedures, 1969-1970

(PCD), acting on the PCRs. With Army programs evolving on this piecemeal basis, the formulation of the initial Army budget submission was the vehicle for the comparison and adjustment of resource and military and civilian manpower allocations accumulated from the PCR-PCD procedures. Beginning in calendar year 1970, DOD deemphasized the PCR-PCD procedures as the basis of programming in the PPBS. Instead, submission of a Service department Program Objective Memorandum (POM) in response to comprehensive OSD fiscal allocation guidance for the period FY72-FY76 was required. The purpose of the POM was to elicit a detailed statement of the Services' force and resource needs for the period covered by the FYDP. In essence the resource allocations in the POM (i.e., force structure, manpower, materiel), following OSD review and decisions, were to provide the basis on which Service budget submissions for FY72 would be predicated. The Army POM required the detailed development of Army forces, military and civilian manpower allocations, other resource needs, and associated cost estimates for these programs.

Specific DOD Constraints on Army Program Development

Preparation of the POM is initiated by the OSD Fiscal Guidance Memorandum (FGM), under the revised DOD PPBS procedures. The first FGM was issued by the Deputy Secretary of Defense to all Service Secretaries and heads of Defense Agencies in March 1970 for the FY72-FY76 POM development.⁴ The POM force structure and resource programs required by the FGM were not zero-based but projected from the DOD-approved funding levels for the 2 fiscal years preceding the budget year, as reflected in the President's budget and the FYDP.

Issuance of the FGM culminated the discussion among OSD, JCS, Service Secretariats and their respective senior staff officials during the planning phase for program development. This period of "participatory management" activity afforded presentation of Service views and competing arguments concerning national strategy, force levels and tentative DOD allocations of fiscal and logistical resources among claimants. Thus, the FGM served both as an OSD decision paper on these views and arguments as well as establishing program development controls over the Services' POM preparation at the Departmental level.

FGM Constraints. The FGM comprised a narrative policy directive and a set of fiscal guidance tables for each of the preceding and current fiscal years (FY70-FY71), the budget year (FY72) and 4 program years (FY73-FY76). The narrative provided direction to Service Secretaries for POM development and explicit instructions governing the application of the fiscal guidance tables. The common format of the fiscal guidance tables established categories of forces, missions, and costs to which funding allocations were assigned for each Service and Defense agency, where appropriate.

The common denominator for fiscal allocation to these fiscal guidance categories was constant (FY70) dollar aggregations, expressed as Total Obligational Authority (TOA). TOA is defined as "The total financial requirement of the Five Year Defense Program (FYDP) or any component thereof required to support the approved program of a given year."² The fiscal guidance categories specifically applicable to the Army are shown in Table C-1.

The FGM required that the Army POM consist of a base program, alternative program, and a decremented program. The specified nature of these programs, as outlined below, in conjunction with the application of the fiscal guidance tables, were the major constraint parameters to which the DA management level had to conform.

Base Case Program. The base case program provided for the DOD objective of a balance of forces and missions among all Services within the total DOD TOA ceiling. As indicated in Table C-1, the FGM specified certain categories for which assigned funding levels had to be adhered to in Army force structure and resource program development, in addition to the total Service ceiling. The DA termed these specified base case program fiscal guidance categories as "OSD fences." These fences constrained any reallocation of funding by the DA to the other unfenced categories, and were required to be carried through the entire 5-year program period of the POM.

Alternative Program. The alternative program allowed the DA to disregard the OSD fences and propose specific changes to the base case program, still within the Service total ceiling. This permitted reallocation of funds among all fiscal guidance categories to provide better program balance from the DA viewpoint.

Table C-1

OSD Fiscal Guidance Categories for Allocation
of Army TOA Dollars, FY72-FY76

MAJOR MISSION FORCES

Strategic Forces^a
 Defensive
 Control and Surveillance
Land Forces^{a,b}
Mobility Forces

Total Major Mission Forces

OTHER MISSIONS

Intelligence and Security^a
Communications
Research and Development^a
Support to Other Nations^a
 MASF
 Procurement Allies War Reserve Stocks

Total Other Missions

GENERAL SUPPORT

Bases and Individual Support
Training
Command
Logistics

Total General Support

TOTAL TOA \$ = Army Ceiling^{a,c}

^aOSD "Fences" on base program.

^bFence applies to total of DOD General Purpose Forces (sum of Land Forces, Tactical Air Forces, Naval Forces).

^cTotal reduced for decremental program.

Note: FYDP program elements are assigned to each category by DOD directive.¹⁹

Decrement Program. In anticipating the contingency of further reduction in the total Defense ceiling for the budget year, the Service departments were assigned a uniform large reduction or "decrement" of the TOA ceilings of the base case and alternative programs. This decrement was also applicable to the 4 program years. This annual decrement was distributed by Army management so as to permit the best obtainable balance between desired force structure and estimated available supporting resource programs.

DOD Methodological Constraints. Preceding the formal issuance of the OSD FGM, the DOD staff in January 1970 produced the detailed document "Illustrative Force and Resource Annex."³² Included in this volume are numbers of tables depicting Army forces, military and civilian manpower, and funds (TOA) distributed and translated in various categories and functions. Examples of the kinds of translations reflected were those which translated fiscal guidance categories to the FYDP programs, or to the appropriations budget structure.

These various tabular constructions reflected the DOD staff conception of how the Army should be composed, manned, and funded and may have been of considerable influence on the decisions reflected in the subsequent OSD fiscal guidance. The illustrative force and resource annex also included a section on DOD manpower computational methodologies, military and civilian manpower ratios and factors and allocation rules, which supported how these determinations were made. These DOD manpower computational methods and factors were not formally directive in nature relative to Army manpower program development for the POM. Nonetheless, as the basis for both tentative and final OSD fiscal guidance it is logical that they represented very real constraints on how the Army constructed its manpower programs, since they provided a set of criteria against which these programs could be evaluated during DOD review and OSD decisions on the POM programs.

DOD PPBS Controls

The various DOD constraints discussed above are exercised through the structure of the formal DOD PPBS system prescribed in Department of Defense Instructions (DODI) 7045.7.² Figure C-2 depicts the DOD PPBS in network form, which also indicates its interfaces with both the JCS and HQ DA levels. DOD control is exercised within the system by the

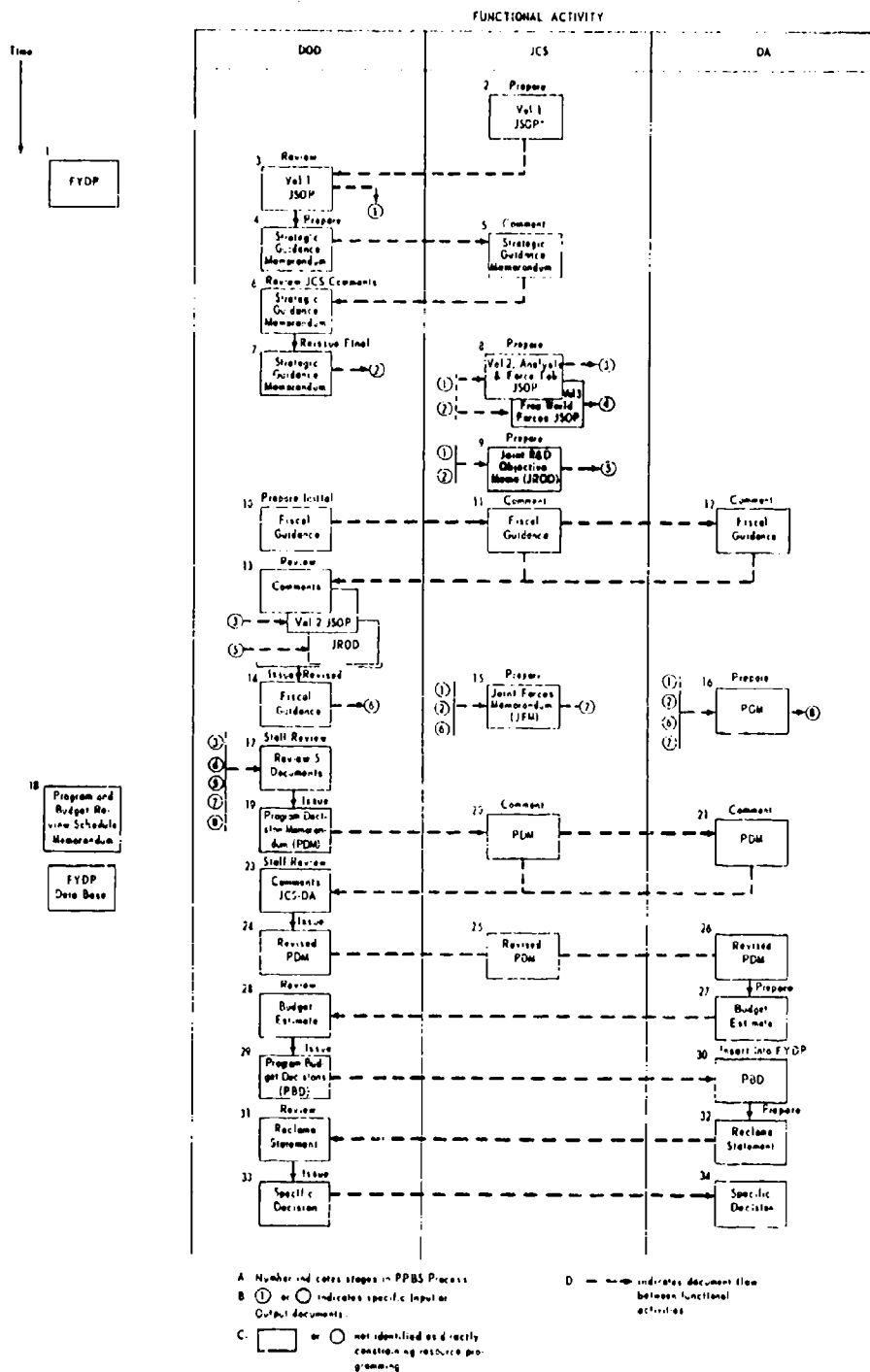


Fig. C-2—PPBS Process
 *JSOP, Joint Strategic Objectives Plan.

maintenance of a current DOD FYDP³ that reflects all DOD approved changes made within the PPBS network. For purposes of analysis of the constraints and controls inherent within the PPBS that affect resource programming, the process can be divided into 3⁴ components or stages.

In retaining the direction of flow within the PPBS structure (Fig. C-2), several stages that do not impose resource programming constraints have been shown. These are identified as such in the key to Fig. C-2 and will not be specifically addressed. Other stages represent intermediate processes and, likewise, will not be addressed. The stages are described sequentially below, and those identified as imposing constraints will be discussed in terms of their effects.

The current DOD FYDP is the starting point for the PPBS cycle. The FYDP constitutes the approved program base subject to update by PDMs, PCDs, PBDs, or Secretary of Defense memorandums. These media constitute formal OSD authorization for a FYDP change. Changes can be made to the FYDP without prior OSD approval within certain confines. These confines or threshold changes constitute a constraint on the freedom with which the DA can make program changes.

Allowable changes for the budget year (BY) can be expressed in terms of forces, manpower, and costs. Force changes to the FYDP are permitted among program elements as long as they do not require additional TOA or manpower. Changes may be made within the approved TOA by cost category during the period July-December unless specifically negated in the annual budget estimate submission instructions or by separate memorandum. No changes are allowed to the approved TOA during the period January-June. Below threshold FYDP, changes can be accomplished by the Secretary of the Army for particular program elements (PEs) when the changes remain below \$10 million or, in the case of manpower, below 300 military or civilian manpower spaces.

Volume II (Analysis and Force Tabulations) of the JSOP - stage 8 - contains the analyses, rationale, and force level objectives developed from the national security and military objectives as outlined in JSOP-I and the Strategic Guidance Memorandum issued by OSD. The Army military manpower data for JSOP-II represent constrained force levels within the strategy guidance issued by the Secretary of Defense.

Issuance of the Tentative Fiscal Guidance Memorandum (TFGM) - stage 10 - represents the first imposition of fiscal constraints on the heretofore strategy-guided Army force structure and manpower levels. The final FGM - stage 14 - defines the total financial constraints within which the DOD force structure will be developed and reviewed.

The JFM - stage 15 - provides the recommended force levels, support programs, and manpower levels constrained by the parameters of the FGM. The JFM includes individual program costs and military manpower summaries of the constrained force level summarized by major mission and support categories. The JFM further compares the costs of the recommended forces and the support programs with the approved FYDP program base line as stated in the Annual Program and Budget Review schedule.

Development of the POM - stage 16 - produces total program requirements and proposed force, military and civilian manpower authorizations, and cost (TOA) implications under FGM constraints. Additionally the POM provides the rationale for any deviations from the FYDP base file and the JFM and the risk assessment and military advantages to be gained.

The Program and Budget Review schedule enforces time constraints for submission of various items of documentation to OSD. The schedule is revised as necessary. The following items are contained in the original and revised schedule: the base program from which all proposed changes will be made, a specific date for the submission of the POM, identification of special reviews and studies to be conducted during the calendar cycle, and the date for a meeting to discuss major force issues between OSD, JCS, and the Service departments.

PDM - stage 19 - are issued following OSD review of the POM in light of the JSOP-I, II, the Joint R&D Objective Memorandum (JROD), and the JFM. Within 2 weeks after receipt of each PDM, Service comments (reclamas) must be submitted to OSD. On an "as-required" basis, the Assistant Secretary of Defense (Comptroller) (ASD[C]) will issue a PCD that will direct FYDP updates to be submitted. The PCD includes any special update and program structure changes necessary for the specific update.

During stage 27, Service budget estimates are prepared based on the approved programs resulting from incorporating the effects of all PDMs on the POM through a predetermined date (announced through the Program

and Budget Review). The budget estimates include the BY and the 2 prior fiscal years. PBD - stage 29 - are addressed to specific budgetary issues and are related to the appropriations budget activity structure.

As indicated previously, the DOD FYDP is central to the overall DOD control exercised through the PPBS. However, the Army programs developed for the POM must also be structured in the fiscal guidance categories (FGC) of the OSD FGM, as well as in the appropriations budget program classifications (Army Management Structure [AMS]). Additionally, Army force structure and programmed military manpower must be displayed in the DOD Land Forces Classification System (LFCS) categorizations. During program and budget formulation—following stages 19 to 26 in Fig. C-2—the FYDP and appropriations budget structures prevail. The implications of these multiple program classifications in Army manpower programming system operations are developed in a subsequent section of this appendix.

DA MANAGEMENT CONTROLS AND CONSTRAINTS

Interpretation of DOD Constraints

The DA Management Problem. The Headquarters (HQ) DA management level comprises the Army Secretariat and Office, Chief of Staff, Army (OCSA) and their immediate supporting staff offices (Fig. 2-2, Chap. 2). DA management plays a significant role in responding to the DOD controls and constraints. It is also confronted with some difficult internal control problems. Principal among these is the translation and reaggregation of the OSD FGM into more finite and meaningful terms. This task must also take into account the institutional nature of the functional organization of HQ DA and the varied operating responsibilities of the Army staff agencies throughout the PPBS cycle. As discussed in Chap. 2, based on their knowledge of Army needs, these senior officials must make initial choices on how best to allocate resources and dollars among programs. There is the necessity of deciding early in program development just what to "buy" among competing Army claimants for TOA dollars as the result of carry-overs of prior years' shortfalls and certain fixed programs. Priority must be determined among manpower, materiel, and services, relative to the size of the Army force structure deemed attainable within OSD fiscal guidance. In coping with these competing requirements and priorities for resource allocation, DA management also

seeks to obtain a relatively smooth projection of resources over time. This is essential in order to minimize wide year-to-year fluctuations in forces, manpower, and long-range investment programs, while at the same time providing for necessary operating support.

Implementation of DA Management Controls

Basis. The central program control requirement of DA management is to adjust planned Army objective requirements for forces, manpower, and other resources into proposed authorization programs that respond to DOD constraints. The Army's planned requirements are expressed in the Army Force Development Plan, Vol I (AFDP-I), produced by the Army staff planning process as the vehicle for the DOD-JCS-DA conferences leading to program development in the PPBS (see Fig. C-2). AFDP-I contains the DA-approved base-line force and military and civilian manpower requirements. Military manpower requirements are derived from and displayed principally in terms of the Army force structure. However, in keeping with present DA manpower policies and traditional Army practice, civilian manpower in AFDP-I is identified separately from the force structure. It is expressed principally in terms of the appropriation budget classifications from which civilian employee compensation is funded, and allocated to Army commands and agencies. These disjunct modes of developing and expressing military and civilian manpower in requirements planning are carried through into POM program development. The effect of this carry-over is to perpetuate the separate approaches to military and civilian manpower and the separate programming paths in current system operations (Table D-1, App D).

The offices and staffs of the Assistant Secretary of the Army (Manpower and Reserve Affairs) (ASA[M&RA]) and the Assistant Vice Chief of Staff, Army (AVCSA) collaborate in translating OSD fiscal guidance constraints into programming guidelines for the Army staff. The office of the AVCSA also performs continuing coordination with the various functional Army staff agencies for programming data development and management reviews as programs evolve.

The DA initial guidance for Army FY72-FY76 program development took the form of an Army Secretariat Memorandum issued in mid-April 1970.¹⁵ This paper set down alternative and preferred approaches for the

development of the three cases required for the POM by the OSD FGM. These approaches were further amplified by various constraints, expressed in terms of aggregated LFCS force structure categories and military manpower strength control totals for the various LFCS categories spread by time through the 5-year programming period. Certain military manpower strength adjustments were specified to reflect various force structure changes projected for the programming years. Civilian manpower guidance was more generalized and expressed principally in appropriation budget program terms. The overall manner in which DOD constraints were transposed to internal DA program controls and constraints is shown in Fig. 2-3, Chap. 2. The alternative and preferred approaches in this guidance implied requirements for extensive programming iterations by functional staff agencies, with frequent management-level reviews for the evaluation of outcomes and adjustments of allocations as the POM programs evolved. The Secretariat guidance was also supplemented by procedural and policy guidance from the CSA to the Army staff.¹²

The Assistant Chief of Staff for Force Development (ACSFOR) was formally assigned responsibility for the development, coordination, and submission of the completed Army POM program documentation. However, as indicated above and in Chap. 2, the principal coordinating agency within the DA management level was the AVCSA assisted by the Select Committee (SELCOM) and Program Guidance Review Committee (PGRC). Thus, the AVCSA further translated the Secretariat-CSA guidance into programming guidance to the Army staff. Individual members of the PGRC acted as the channel to the respective parent staff agencies for transmission of this implementing guidance (Fig. 2-2B, Chap. 2).

DA Program Control Vehicle. The AVCSA-SELCOM-PGRC vehicle for conveying DA management guidance and decisions to the Army staff was a display format termed the "Force Structure/Account Display."³³ A simplified outline of the major elements of this format is in Table C-2. This display was also the means used to summarize and present the Army staff responses to the alternative and preferred approaches indicated in the initial guidance. The Force Structure Account Display outlined in Table C-2 was similar to a summary display used in AFDP-I for the expression of planned military and civilian manpower requirements. This

Table C-2

Force Structure Account Display Format

(Note: The force structure and manpower data are shown for the end of each of FY71, FY72, FY73. FY74-FY76 are aggregated together.)

Division Forces	<u>Div</u>	<u>ISI^a</u>	<u>SSI^a</u>	<u>TOE/TDA Spaces</u>	<u>Man- power</u>
(listed by specific	X	X	X	000	000
oversea areas and	X	X	X	000	000
CONUS)	X	X	X	000	000
	X	X	X	000	000
Totals	XX	XX	XX	000	000
Special Mission					000
General Support					000
Trained Individuals					000
Trainees					000
End Strength					000

TOA (\$ Millions)

	<u>FY72</u>	<u>FY73</u>	<u>FY74</u>	<u>FY75</u>	<u>FY76</u>
MPA ^{a,b}					
OMA ^a					
PEMA ^a					
RDTE ^a					
MCA ^a					
Reserves					
RPA ^a					
NGPA ^a					
OMANG ^a					
MCAR ^a					
MCANG ^a					
Total					
	Military Man-years (000s) ^c				
	<u>FY72</u>	<u>FY73</u>	<u>FY74</u>	<u>FY75</u>	<u>FY76</u>
	Civilian Man-years (000s) ^d				
	<u>FY72</u>	<u>FY73</u>	<u>FY74</u>	<u>FY75</u>	<u>FY76</u>

^aISI, initial support increments; SSI, sustaining support increment; MPA, military personnel, Army; OMA, operation and maintenance, Army; PEMA, procurement of equipment and missiles, Army; RDTE, research, development, test and evaluation; MCA, military construction, Army; RPA, reserve personnel, Army; NGPA, National Guard personnel, Army; OMANG, operation and maintenance, Army National Guard; MCAR, military construction, Army Reserve; MCANG, military construction, Army National Guard.

^bSelected priority or decremented programs identified under each appropriation.

^cMilitary man-years specified for selected high-priority programs.

^dCivilian man-years based on an assumed FY71 civilian end strength.

display, with appropriate data filled in, was provided for each of the three inputs required for the POM; i.e., the base case program, the Army alternative program, and the decremented program (Table C-1). The LFCS force structure and military manpower portion of this format was spread by the budget year (FY72) and 4 program years (FY73-FY76), projected from the current fiscal year, with annual end-year levels of the number of division forces and military manpower strengths for the categories shown. The manpower end strengths for each category and for trained, trainee, and total military strengths were major constraints to be observed by Army staff agencies in the coordination and development of force structure and military manpower authorization programs for the POM.

The lower part of the format restructured the OSD fiscal guidance TOA allocations into appropriation budget program terms. Under these headings, the Secretariat allocation decisions and specified "floors" for high-priority program funding were indicated, as well as those programs to which the annual decrement was applied. Certain of these programs were reflected under more than one appropriation heading. SAFEGUARD, for example, was shown under all appropriations except those for Reserves. Dollar constraints on both military and civilian manpower were stated for each fiscal year in man-year terms (the arithmetical average of beginning and end-year manpower strengths used for calculating manpower costs). In contrast to the specificity of force structure and military manpower distribution and control strengths, civilian manpower was expressed only in aggregated terms of current fiscal year total end strength and man-year totals for the budget and program years.

The differences in the level of categorization and distribution of military manpower program control strengths in the force structure account displays was notable in comparison to the much more generalized guidance for civilian manpower programming. It was consistent, however, with the manner in which military and civilian manpower requirements are planned in AFDP-I and authorizations programs subsequently developed, as described in App D. The nature of these differences would appear to have a major effect on both ACSFOR programming activities and higher management levels in making tradeoffs and allocations of these two kinds of Army manpower during subsequent detailed program development, coordination, and review. This is owing to the lack of any discernible

and rational linkage of military and civilian manpower in some directly comparable way, within the three-dimensional nature of the Army management constraints on program development shown in Fig. C-3. In one dimension these constraints are the bounds on the development of the interdependent resource programs for which the various functional Army staff agencies are responsible. In another dimension they bound the TOA program development of these agencies in their differing roles as appropriations directors and program and subprogram directors. Within these boundaries the lack of a central point of reference for the visible correlation of the manpower aspects of these two dimensions with the constraints of the third is evident. Thus neither DA management nor manpower programming activities has any apparent means of determining if programmed allocations of military and civilian manpower are sound and valid or tradeoffs available within cost constraints. This condition is further complicated by the continuing adjustments in the various elements of the force structure account displays resulting from program development reviews and the differing bases from which military and civilian manpower authorizations are derived.

DA PROGRAM DEVELOPMENT PROCESS CONSTRAINTS

Constraints of Organizational Complexity

The nature of the foregoing problems can be illustrated by a graphic representation (Fig. C-4) of the task responsibilities and relations of the Office of the Assistant Chief of Staff for Force Development (OACSFCD) and the other functional Army staff agencies in the program development process resulting from the implementation of DA management controls and constraints. Figure C-4 shows the staff activities assigned by Chief of Staff Memorandum (CSM)¹² to the Army staff for FOM program development and submission during the calendar year 1970 POM exercise, and is the basis for the following analysis.

The complexities encountered in the POM development process can be broadly categorized by the problems they create. Notable is the fractionalization of the decision-making process among the several staff elements. This requires that tradeoffs involving resource allocations—both manpower and dollars—must go through numerous reiterations before arriving at the levels reflected in AVCSA/PGRC guidance. Compounding this situation are

Army Staff Agencies

FUNCTIONAL RESOURCE PROGRAMS IN PROGRAM ELEMENT DETAIL

- Force Structure - Units - Deployments
- Materiel - Facilities -
- Manpower - Personnel - etc.

Div Forces (DF)	TOE/TDA Spaces			Manpower Str.
	Div	ISI	SSI	
Overseas	X	X	X	000
Other	X	X	X	000
Total DF	X	X	X	000
Spl Mission Forces				
Overseas				000
CONUS Air/Msl Def				000
Other				000
Total SMF				000
Gen. Spt. Forces (Total only)				000
Trained - Trainee - End Str. Totals				000

TOA \$ BY APPROPRIATION ACCOUNTS

(Incls. Ceilings/Floors/Decrements)

Mil. Man-year Totals — — —

Civ. Man-year Totals — — —

Appropriation and
Program Directors

AVCSA
PGRC

Fig. C.3—Army Management Constraints on Program Development

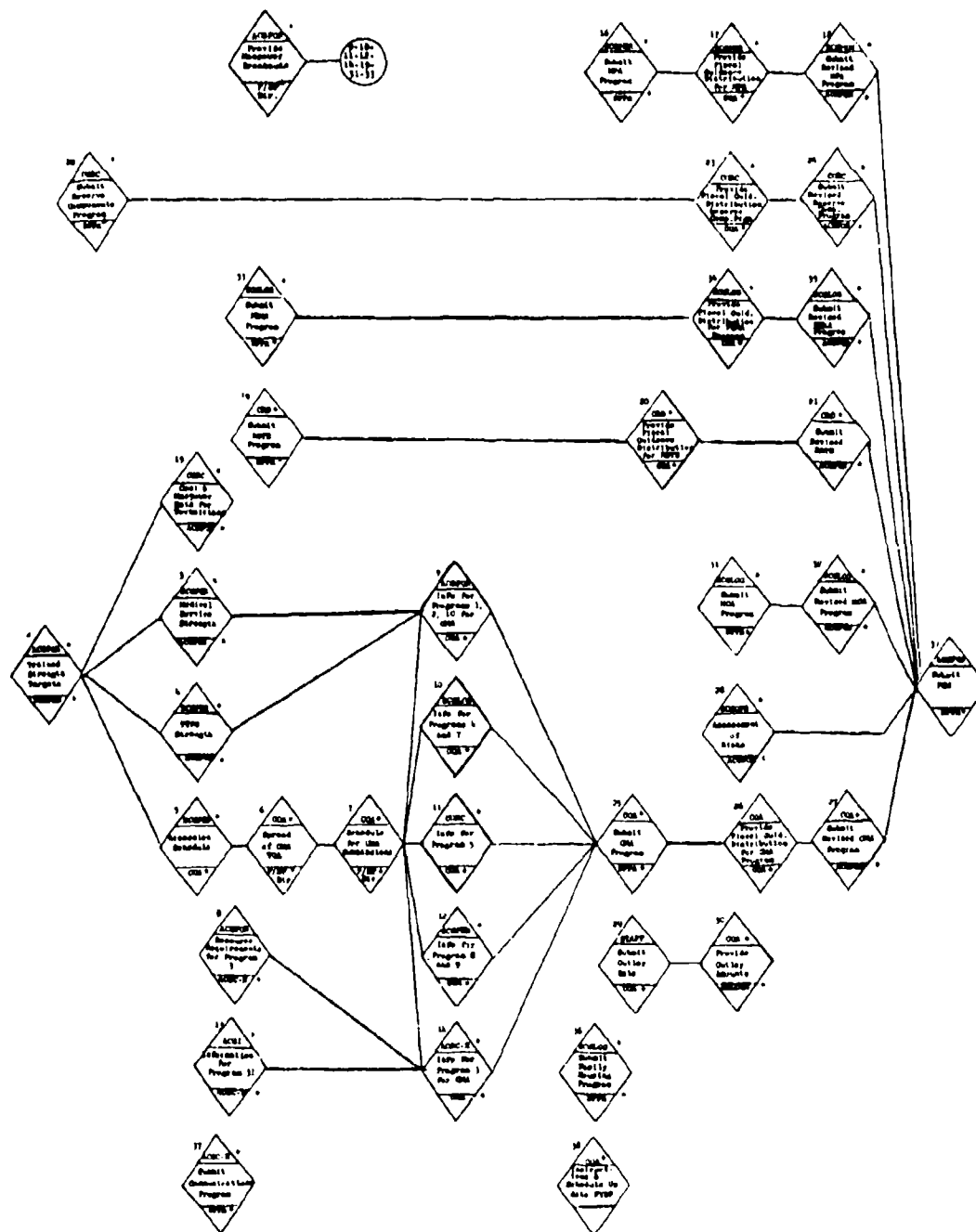


Fig. C-4—POM Development Network

*P/S, program and subprogram; DCSPER, Deputy Chief of Staff for Personnel; DPPA, Director, Program and Planning Analysis; CORC, Chief, Office of Reserve Components; DCSLOG, Deputy Chief of Staff for Logistics; CRD, Chief of Research and Development; DCSOPS, Deputy Chief of Staff for Military Operations; ACSC-E, Assistant Chief of Staff for Communication-Electronics; TTPS, transients, trainees, patients, students; ACSFOR, Assistant Chief of Staff for Force Development; COA, Comptroller of the Army; SELCOM, Select Committee; ACSI, Assistant Chief of Staff for Intelligence.

the several different types of interdependencies involved in developing the various POM programs and subprograms. One type is where an adjustment in resources for one program will require compensating adjustments to be made in other programs. For example, an adjustment involving an increase in civilian strength for one program will have to be compensated by a decrease in another program. These particular programs can also support tradeoffs between civilian and military personnel. The possibility for tradeoffs exists in three areas—civilian for civilian within and between programs, civilian for military, and military for civilian within programs. The problem is to establish the relations under which these tradeoffs can be made. Maintenance of the FYDP requires that such resource changes be reflected by an adjustment at program element detail for the affected programs. In working in such detail, it appears that the relations necessary for making manpower tradeoffs—optimized according to specified criteria—became buried within the complexity of the process.

Another form of interdependency inherent in the PCM development process is the situation in which Army staff program directors^{17,34} must rely on information furnished by other staff elements. This imposes an additional constraint in terms of the amount of time available to complete the POM development process.

Viewing the Army POM program development process (Fig. C-4) as a series of interdependent tasks provides a method of examining the complexities described above. Each diamond on the chart represents a particular POM-related task. The center of the diamond indicates the specific assignment to be accomplished. The top and bottom portions identify the Army functional staff agencies involved in the task. The office or staff agency at the top of the diamond is assigned responsibility for performance of the task; the recipient of the results is shown at the bottom. Lines between tasks indicate the dependency of one task on another.

As Fig. C-4 indicates, the OMA program development comprises task 6 (in which the Comptroller of the Army (COA) develops a spread of OMA TOA), task 7 (COA's preparation of an OMA program submission schedule), tasks 9, 10, 11, 12, and 14 (which require the five staff elements shown to provide information on the programs for which they are responsible),

task 25 (submission of the initial OMA program), task 26 (providing the fiscal guidance distribution for the OMA program), and, finally, task 27 (the submission of the revised OMA program). The OMA program development path illustrates some of the interdependencies involved in portions of the POM development process. For example, task 9, in which OACSFOR develops information for FYDP-OMA programs 1, 2, and 10, depends on the information provided by DCSPER on medical service strengths and TTPS strength. Likewise the development of FYDP-OMA program 3 by ACSC-E depends on information from OACSFOR and ACSI.

The fractionalization of the civilian manpower allocation process can also be traced using the OMA path as an example. Fractionalization occurs in the case where each of the OMA program directors must allocate civilian manpower spaces independent of the programming actions of the other program directors. Reprogramming actions involving tradeoffs between programs require first a decision at a level higher than the program directors and second the subsequent reprogramming of all programs on which the decision impacts. The difficulty with this process is that not all the factors affected by the decision are known at the time of the decision. Consequently a reiteration of the programming cycle is required to establish these factors. The result is that the process of developing a particular OMA program must be repeated several times before the best obtainable resource levels by PE are established.

Time Constraints in Program Development

The POM task network can be used to illustrate the time constraints under which the POM is developed. Figure C-5 shows the same POM development tasks as Fig. C-4 except that suspense dates—those assigned by CSM¹²—have been associated with several of the tasks. The D-dates for particular tasks represent the suspense dates as calculated from the date the final force and manpower decision was received or D-day. There might be some incongruity in these dates because the CSM guidance assigned suspense dates in terms of both D-dates and calendar dates. The calendar dates have been converted to D-dates (several of which might be off by 1 or 2 days owing to conversion), but this should be satisfactory for illustrative purposes.

It should be noted that some tasks were completed before the receipt of the final force and manpower decision (see key, Fig. C-5). Also, separately identified are those tasks for which COA imposed internal suspense dates. The majority of these tasks are those associated with the submission of FYDP-OMA budget programs.

By examining a few of the task suspense dates a good view can be had of the close time constraints to which Army staff programming offices had to respond for development of the POM program. The day following receipt of the final force and manpower decision (D+1), OACSFOR had to provide ODCSPER with trained strength targets (Task 2). On D+3, OACSFOR provided manpower breakouts to the staff (Task 1). These would be furnished to the staff program and subprogram directors as shown on the chart. Approximately 5 days were permitted to develop the OMA programs, which require the completion of Tasks 3 to 14 and culminate in the submission of the initial OMA submission in Task 25.

It is interesting to note the variance in initial program submission dates for the other major programs. The Reserve Components program (Task 22) on D+2 and the PEMA and RDTE programs (Tasks 33 and 19) on D+5 were required to be submitted quite early in the process. All revised program submissions were to be made to OACSFOR by D+15 with the final POM submission scheduled for D+19.

The overall constraints imposed by the POM development process on resource programming might be summarized as a combination of process complexity and time limitations, stemming from HQ DA organization and the related Army staff program and fiscal management responsibilities.

Throughout the POM program development processes described in the foregoing, military manpower authorizations are essentially associated with the programmed force structure within total Army military end strengths. They are expressed principally in terms of unit strength aggregations in the FYDP, FGC, and AFS program elements and for the computation of the MPA appropriation programs by ODCSPER. Conversely, civilian manpower authorizations and allocations are fractionalized and diffused, owing to the budget-based approach in use for authorizations development. These considerations are examined further below.

MULTIPLE PROGRAM CLASSIFICATION STRUCTURES

General

Previous reference has been made to the problems posed by the various prescribed program classification structures as these relate to the application of DOD-DA controls and constraints in the PPBS cycle. The following analysis provides detailed background on these multiple program classifications with regard to Army manpower programming.

Figure C-6 shows the four principal programming structures within which military and civilian manpower and force authorizations must be developed, coordinated, recorded, and funded. Also shown are some of the assigned Army Staff major program and fiscal management responsibilities related to the systems. As portrayed in Fig. C-6, these programming structures are visualized as a four-sided "exploded" box within which program and budget activities ensue. The joints or hinges between the sides of the box indicates the points through which program data can be translated from one structure to the other. The shaded bars indicate how military and civilian manpower data elements are distributed in the various structures. The accompanying numbered notes provide references to the official documentation and brief descriptive information for each system.

FYDP Structure

This is the DOD-prescribed² system for reflecting all approved forces, resources, and related budget-fiscal data. As such, its purpose is to provide the approved authorization bases for the current and previous fiscal years, the coming budget year, and 4 out years. In terms of program content, each of the 10 programs is broken down by DOD into a set of alphanumeric codes and word descriptors, identified as FYDP PEs.³⁵ There is a wide disparity of PE detail content within the 10 programs, ranging from 7 PEs in Program 10, 24 in Program 7, 93 in Program 2, and 147 in Program 6. These PEs represent units and organizations, materiel, manpower, and TOA dollars. TOAs may also be grouped and identified by budget appropriations nomenclature pertaining to a PE.

As noted on Fig. C-6, an Army Staff Program Director is assigned for each FYDP Program. He is responsible for the development, coordination, justification, sense, and management of his program. This responsibility can get complicated, however, by the fact that the Program

AMS BUDGET STRUCTURE (4)										FYDP PROGRAM STRUCTURE (1)										LPC		
MPA	OMA	PENA	MCA	RD TLE	MC-PA	OM-MCA	MC-MCA	BPA	MC-MR	1	2	3	4	5	6	7	8	9	10	CATEGORY A - DIVISION POWERS		
DCS PER	COA	DCS-LOG	DCS-LOG	CRD	CNG8	CNG8	CNG8	CAR	CAR	Strategic Forces	Gen. Purpose Forces	Intell & Commo.	Airlift Sealift	Guard & Res Forces	R&D	Cent. Sup & Maint	Eng. Med & GPA	Admin. & Assoc. Act	Spl Other Nations	Land Area	Sea	
APPROPRIATIONS DIRECTORS (5)										MAJOR PROGRAM DIRECTORS (2)										CATEGORY B - SPECIAL RESERVE		
										ACS-FOR	ACS-FOR	ACS-C-E	DCS-LOG	CORC	CRD	DCS-LOG	DCS-PER	DCS-PER	ACS-FOR	Land Area	Sea	
										(3)										CATEGORY C - GENERAL SUPPORT		
										Program Elements										Land Area		
										Military Manpower and MPA Costs in Programs by Program Elements										CATEGORY D - INDIVIDUALS		
										Civilian Manpower and Costs in Programs by Program Elements										Land Area		
										FYDP Programs Summarized by Forces, Materiel, Military & Civilian Manpower, Costs, Appropriations (TOA), Comd. Areas.										Land Area		
										AMS Budget Programs Summarized by Appropriations - TOA										Land Area		
<p>AMS Budget Programs Summarized by Appropriations - TOA</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p> <p>AMS (Budget Program Subprograms)</p>										<p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p> <p>Program Elements (Same as FYDP (1))</p>										<p>Category A - Division Powers</p> <p>Category B - Special Reserve</p> <p>Category C - General Support</p> <p>Category D - Individuals</p>		

FYDP Summarized by TOA & Forces, Manpower, Materiel, Comd. Areas													
Program Elements (Same as FYDP (1))													
Military Manpower and MPA Costs in Categories by TOA													
Civilian Manpower and Costs in Categories by TOA													
FYDP Programs Summarized by Forces, Materiel, Military & Civilian Manpower, Costs, Appropriations (TOA), Comd. Areas													
Strategic Forces	Land Forces	Maritime Forces	Intell & Sec	Commo	R&D	Spl Other Nations	Base & Encl Spt	Train	Com mand	Engs	Med	Family Housing	Military Construction
MAJOR MISSIONS				OTHER MISSIONS				GENERAL SUPPORT				MISC COSTS	

FISCAL GUIDANCE CATEGORIES (OSD TPGM & FGM) (7)

[illegible]

- (1) DOD prescribed system for reflecting all approved forces, resources, and budgetary data (Ref: DODI 7045.7, 7045.8)
- (2) Major Program Directors are responsible for development, coordination, justification and management of assigned programs and resources. (CSR 11-5)
- (3) Army Program Element descriptions and codes prescribed in DOD Handbook 7045.7-H. Each program element within a major program is assigned a Program Element Director from Army Staff agency with functional interest (CSR 11-5).
- (4) The budget structure is required by Congress for budget reviews and legislative authorizations. Detailed structure of each appropriation and the AMS code is specified in AR 37-100-71.
- (5) Appropriations Directors are responsible for preparation, coordination and justification of respective appropriation budget programs (CSR 37-4). Statutory responsibility for management of appropriated fund obligation.
- (6) OMA Budget Program structure corresponds to FYDP Program structure, less Program 6 (R&D) (AR 37-100-71). FYDP Major Program Directors are also OMA Budget Program Directors, with Sub-program Directors assigned from Army Staff agency with functional interest (CSR 37-4).
- (7) Fiscal Guidance Categories (FGC) are contained in annual OSD Tentative Fiscal Guidance Memorandum. Total Obligational Authority (TOA) is allocated by FGC for preparation of Army Program Objective Memorandum (POM). (DODI 7045.7)
- (8) Program elements are the same as used in the FYDP but are re-grouped within Fiscal Guidance Categories. (OASD(SA) Memorandum, "Definition of the Fiscal Guidance Categories by Program Element," 25 Nov 1970).
- (9) LFCS is a non-financial system prescribed for Army force structure and military manpower programming and analysis on a "force package" (FPLAN) basis. (DASD(R&LFA) Memorandum, "The Army and Marine Corps Force Classification System," 1 May 68). Civilian manpower not included in LFCS.

Fig. C-6—Classification Systems Prescribed for Programming Army Resources and Forces

Director does not, in all cases, control all PEs in his program. This is because each of the PEs within the 10 programs is also assigned a PE Director who may or may not be from the Program Director's functional agency. For example, in Program 7, DCSLOG is Program Director, and all 24 PE Directors are designated from ODCSLOG. On the other hand, for Program 2, ACSFOR as Program Director has the PE Directors for 99 or slightly more than half of the 93 Program 2 PEs. DCSOPS is PE Director for six PEs in Program 2, DCSLOG for 10, and CRD for 18. ACSFOR must obtain and coordinate the PE inputs of the other PE Directors involved. Similarly in Program 8, DCSPER as Program Director shares PE directorships with the functional interests of ACSC-E, The Surgeon General (TSG), The Adjutant General (TAG), and DCSLOG. In Program 9, PE Directors besides DCSPER are DCSLOG, ACSFOR, ACSC-E, and COA.

To show the manpower relation in the FYDP structure, Table C-3 summarizes by FYDP program the number of PEs in each program that include manpower spaces in terms of military only, military and civilian together in a single PE, and civilian only.

Table C-3
FYDP Manpower PE Summary^a

Program	1	2	3	4	5	6	7	8	9	10	TOTAL
Military Only	5	30	-	-	-	2	-	5	2	-	44
Military & Civilian	7	34	19	8	13	8	16	15	6	3	129
Civilian Only	1	-	-	1	-	-	-	-	-	-	2
Total Manpower PE	13	64	19	9	13	10	16	20	8	3	175

^a Based on October 1970 FYDP for Army forces only. Does not include military and civilian manpower of Army elements of DOD and certain joint activities.

In the PE in Table C-3, military spaces are identified only as officers, enlisted, and total spaces. Civilian spaces may be identified as US direct hire, foreign national direct hire, foreign national indirect hire, or an aggregate of all three. Manpower space data in a PE may range from more than 15,000 officer and enlisted spaces identified with a combat division program element on down to two civilian foreign national direct hire spaces associated with the PE of a field headquarters.

TOA for PE military spaces is identified as MPA dollars. TOA for civilian manpower is not separately identified but is included within dollar amounts identified with budget appropriations (i.e., OMA, PEMA, MCA, etc.) from which the PE is funded.

As a principal DOD management control, the FYDP attempts to homogenize Army forces, manpower, materiel, and fiscal implications on an across-the-board basis with those of the other Services. The FYDP program structure obtains for the DOD a greater degree of fiscal and functional program control than that afforded by the appropriations budget structure. It is a sophisticated and complex method of capturing and accounting for the vast resource detail of all the Services. However, despite the PE detail involved, the FYDP program structure does not provide a vehicle within the DA for meaningful comparison of military and civilian manpower authorizations and allocations for two reasons: First, the PE manpower content is derived in markedly different ways in the current programming system (Chap. 2 and App D). Second, the FYDP structure does not reflect the Army as a coherent uniquely-structured manpower-oriented system relative to Army mission, functions, and command organization. For these reasons the FYDP program classifications and PE detail tend to obscure the relation between military and civilian manpower within HQ DA and contribute to the difficulty of meaningful comparison and evaluation of military and civilian allocations.

Additionally the FYDP program structure outlined in Fig. C-6 and Table C-3 and the fractionated Program Director-Program Element Director responsibilities require detailed ACSFOR coordination of all program elements—particularly those involving civilian manpower authorizations—throughout the operations of the PPBS cycle (App D). Thus the magnitude of the coordination tasks to be accomplished by OACSFOR Manpower and

Forces Directorate (MFD) programming activities is critical, especially in view of the previously described time constraints.

OSD Fiscal Guidance Categories

The above examination of the FYDP is also germane to the OSD FGC depicted as the bottom side of the box in Fig. C-6, with one notable difference. That is, the FGCs constitute a unique program classification structure, applied only once during the development of the Army POM programs in response to the OSD FGM under the revised DOD PPBS procedures.²

DOD has specified the use of the FYDP PEs for use as the PE within the FGC, as indicated on Fig. C-6. However, it should be noted also that the FGCs do not correspond directly to the FYDP programs, despite some similarity of nomenclature between the two. As a result, there is a significant regrouping of PEs within the FGCs.¹⁹ Illustrative of the rearrangement of PEs between the FYDP program classifications and the FGCs is the following.

All program elements for Base Operations reflected in FYDP Programs 1-5 and 7-8 are grouped in the FGC General Support - Base and Individual Support, under the subcategory, Base Operating Support. Similarly the PEs for headquarters elements and operations carried in FYDP Programs 1-5 and 7-9 are grouped under the FGC General Support - Command. FYDP Program 5 PEs are distributed throughout the various FGCs since there is no specific fiscal guidance category for Guard and Reserve forces.

The DOD proponent for the OSD FGC is the OASD (SA).¹⁹ The FYDP is under the ASD (Comptroller).³⁴ During the IMP-I interviews, it was attempted to learn what understanding existed among DA staff personnel as to why these two systems were required by DOD. Some respondents speculated that the FYDP structure was not useful to the Laird-Packard concept of control of Service programs. Another view expressed was that the FGC structure gave the DOD systems analysis staff a different and perhaps more useful basis for across-the-board analysis of all the Services' proposed resource and fiscal authorization allocations than that afforded by the FYDP. Nonetheless, the fact that OACSFOR and other Army staff programming activities must respond to both of these DOD-prescribed structures requires the use of a detailed translation between them. This is because there are no apparent intermediate levels of data aggregation between PE

detail and FGC or FYDP program summary levels. This means that the only way in which manpower authorizations and TOA can be translated, tracked, and reaggregated between these two structures in programming is in voluminous PE detail. Relative to the needs of DA management and decision making as well as at programming activity and intermediate levels, the FGC would appear to have the same shortcomings ascribed to the FYDP as an effective method for displaying and evaluating military and civilian manpower relations.*

AMS

This side of the box in Fig. C-6 is of particular importance as the overall structure within which Congress reviews and takes action on DOD and Army authorizations requests presented in the annual budget submission. The AMS structure is also the framework within which Army commands and operating agencies worldwide plan and execute their operating budgets and report on their financial and resource management programs, including manpower.³⁰

The AMS fiscal code provides the detailed breakdown and data element identification of budget programs, subprograms, and object classes into which each appropriation is subdivided. Beginning in FY71, HQ DA adopted the FYDP Program structure as the basis for the AMS budget program structure of the OMA appropriation, except for Program 6, which remains a separate appropriation (RDTE). In so doing, the FYDP PE codes were incorporated in a massive change of the AMS code for the OMA appropriation.⁶

The restructuring of the OMA appropriation AMS code was a major administrative undertaking, both in the field and at DA. The AMS codes are important identifying data elements in the major DA authorizations and accounting systems (The Army Authorization Documents System and the Force Accounting System [TAADS and FAS]), in manpower management and reporting (CSFOR-78),³⁰ as well as in program and budget formulation and management.¹⁷ This change afforded a fairly clear data translation between the FYDP programs and the OMA appropriation at budget program summary levels as well as PE-AMS code detail in most instances.

* It should be noted that, by use of the Mark Twain System, the Army has the capability to translate manpower by program element into fiscal guidance categories on a 24-hour turn-around basis, making possible translations between FYDP and FGC categories.

Concomitant with this change, the FYDP Major Program Directors are also designated as the OMA Budget Program Directors for the development and fiscal management of the OMA programs.* In this role they function under the coordination and fiscal policy supervision of the COA, the designated OMA Appropriation Director. The PE Directors assigned for the FYDP continue to be responsible for the PEs reflected in the revised AMS code. However, an additional coordination layer appears in the OMA budget structure: the Subprogram Directors who are between Program Directors and PE Directors for specified OMA programs. Table C-4 portrays the OMA Budget Subprograms for which Army staff directors are assigned.

Table C-4

OMA Subprograms and Subprogram Directors

OMA Budget Program	Subprograms	Subprogram Directors
<u>Program 3</u> Intelligence and Communications	3I - Intelligence 3C - Communications 3O - Combat Development Activities	ACSI ACSC-E ACSFOR
<u>Program 7</u> Central Supply and Maintenance	7S - Supply 7M - Maintenance	DCSLOG DCSLOG
<u>Program 8</u> Training, Medical and Other General Personnel Activities	8T - Training 8M - Medical 8O - Other	DCSPER TSG DCSPER

In addition to the budget programs and subprograms of the AMS structure, there are certain programs termed "functional programs." A functional program is defined in CSR 11-5³⁴ as "A special activity, managed or reviewed as an entity, that may cross appropriation or program

* Except for Program 5. CAR is the OMA Budget Program Director instead of CORC.

element lines; for example, manpower, forces." Functional programs also have designated Functional Program Directors. Examples of functional programs and corresponding directors as specified in CSR 37-4¹⁷ are shown in Table C-5.

Table C-5

Functional Programs and Program Directors

Functional Programs	Functional Program Director
SAFEGUARD	SAFEGUARD System Manager
Surveillance, Target Acquisition, and Night Observation (STANO)	STANO System Manager
Management Information Systems and ADP Operations	Director, Management Information Systems, OAVCSA
Base Operations	DCSLOG ^a

^aBase Operations is summarized by AMS code as a carrier account in each OMA Budget Program. However, the detailed account structure elements of expense are consolidated in a separate OMA Base Operations Program (.2000 Accounts) for which DCSLOG acts as Functional Program Director, as described in CSR 11-8.²⁶

As stated earlier, the realignment of the AMS code with the FYDP PE code in the case of the OMA appropriation has simplified the data translation between these two program classification structures. But the staff coordination process with regard to manpower programming within the AMS budget structure during program and budget formulation is at least as complex and detailed as that required by the FYDP and FGC structures, if not more so. The vast scope of this coordination process is implied in CSR 37-4,¹⁷ which states:

"...Budget processes frequently require that one agency accomplishing a budget action needs support in some form from another agency. All members of the Army staff have the responsibility to

provide such support when requested. The nature of this requirement is such that it is not possible to define the requirements or identify the areas in which the requirements arise in this regulation...."*

In Fig. C-6, the different axes of the shaded bars on the AMS Appropriations Structure are further indicative of the complexity of the manpower program and budget processes. This refers to the fundamentally different ways by which military and civilian manpower spaces are ultimately authorized, i.e., funded.

As indicated by Fig. C-6, all budgeting and funding of active military manpower are centralized in the MPA Appropriation under DCSPER directorship. Thus once the programmed military end strength based on the force structure of the Army is established for a given year by ACSFOR and higher echelons of DA management, programming of the TOA for military manpower space authorizations is comparatively straightforward. In overly simple terms, the military pay rates, subsistence costs, PCS travel, and other MPA factors maintained by DCSPER are applied to the military man-years and officer-enlisted breakouts from the military manpower program, with bulk military manpower spaces (TTPS) added in this process by ODCSPER. However, this centralization of military manpower funding in the budget structure in effect detaches military manpower from the Army force structure and functional organization carried in the OMA budget programs.

By contrast, funding for civilian manpower authorizations is spread horizontally across all other appropriations. Within each appropriation civilian manpower is further broken down into the budget programs, sub-programs, and elements of expense within which the related civilian work function is performed. Around 70 to 80 percent of Army civilian manpower authorizations are included within and funded from the OMA budget programs. But civilian manpower authorizations are also funded by the other appropriations, each of which has a unique budget program structure and AMS code reflecting neither the FYDP or FCC PE.**

* Underscoring supplied.

** Except the RDTE appropriation. Although the AMS code for this appropriation was not converted to the FYDP Program 6 PE codes, the latter are carried in each RDTE budget program on a line-by-line basis.⁶

This budget program orientation makes current civilian manpower programming and budgeting very complex and different from military manpower, since civilian manpower authorization programs are initiated principally on the amount of TOA dollars available to each budget program for the hiring of civilian personnel, rather than manpower spaces in the force structure.

Therefore to arrive at programmed civilian spaces currently entails working backward from a complex set of factors. These include a variety of civilian classifications and pay scales—direct and indirect hire, foreign nationals, graded and wage board—and staffing and workload factors peculiar to each budget program, subprogram, and PE. From these computations, the QACSFOR civilian manpower programmer produces a spread of civilian manpower spaces and costs for each AMS budget program and subprogram, the FYDP programs and FGC in PE detail. These civilian manpower program spreads must then be coordinated within the elaborate system earlier outlined for Army budget program, subprogram, functional program, and PE staff responsibility, relative to civilian manpower TOA costs and spaces.

To summarize, the AMS appropriations and budget program classifications, although highly important to budget year manpower authorizations, do not afford a means of visibly comparing and evaluating military and civilian manpower allocations, owing to the way in which these are calculated, structured, and displayed. The AMS, in conjunction with the FYDP, is the principal structure used in developing and programming civilian manpower, however.

Land Forces Classification System (LFCS)

So far, the three sides of the "box" examined in Fig. C-6 have all had a fiscal orientation, with both manpower spaces and dollars categorized in various ways. The LFCS structure shown in Fig. C-6 is a DOD-prescribed⁵ nonfinancial system approach for categorizing and analyzing the force structure of Army (and Marine Corps) forces and associated military manpower.* The principal use of the LFCS structure within HQ DA is for

* Although TDA units in the Army force structure are the basis of authorization for both military and civilian manpower spaces, the latter are not considered in an LFCS structure relation in current programming system operations (Chap. 2 and App D).

force structure, PFMA development, and military manpower program development. Among all the other prescribed program classification structures, the LFCS is unique in its ability to display Army forces, missions, and functions in a coherent, systematic manner, whether in detailed troop list form or in intermediate and higher levels of force and military manpower information aggregations. Its utility as such appears widely recognized at all levels of HQ DA (e.g., note in Table C-2 and Fig. C-3 that the LFCS was the basic framework used by the AVCSA-SELCOM-PGRC for conveying force and military manpower guidance to the Army staff for POM program development).

The LFCS comprises the four categories identified in Fig. C-6. Categories A, B, and C contain both the TOE and TDA unit structure, the military manpower spaces related to the force category structure and the ALO (military manning) for the type of TOE/TDA units included therein. Category D is the individual bulk manpower or nonstructure TTPS spaces account, which is programmed by ODCSPER, based on the total end strengths of the structure categories.

The force structure Categories A, B, and C are broken down into mission-oriented "force packages." Most Category A and B force packages are structured by major overseas command areas. Category C packages may relate to CONUS commands or worldwide missions, or both.

The force packages indicated by the FPLAN letter codes are aggregations of various kinds of TOE/TDA units. These are determined by ACSFOR force planners and programmers as required by the various mission functions prescribed for each force package. Units are identified in force development plans and force programs by the FPLAN codes that associate them with the relevant force package.

The force package titles and FPLAN codes prescribed by DOD are shown in Table C-6. In general the first digit is the LFCS category, the second is the force package designator, and the third is the geographic location or orientation.

During force and military manpower programming, the UIC and AMS codes are associated with each FPLAN unit in troop lists and manpower programs. The AMS code permits translating unit data to the FYDP programs, with accompanying military manpower data, and to the corresponding OMA budget programs. The military manpower data are a

Table C-6

LFCS Force Package (FPLAN) Codes ⁵

CATEGORY A Division Forces (Includes ISI and SSI ^a)		CATEGORY B Special Mission Forces		CATEGORY C General Support Forces	
Force Package Title	FPLAN	Force Package Title	FPLAN	Force Package Title	FPLAN
NATO Force	AN	CONUS Air Def. Force	BA ^b	Training Establish- ment	CT ^b
Europe Force	ANE	Defense Forces	BD	Support Establish- ment	CS ^b
NATO Reserve Force	ANC	Alaska Def. Force	BDA	Logistic Establish- ment	CL ^b
Pacific Force	AP	Panama Def. Force	BDP	Movements Support	CK
Korea Force	APK	Berlin Def. Force	BDB	Combat Developments	CE ^b
SEAsia Force	APS	Iceland Def. Force	BDI	Research and Development	CR ^b
Pacific Reserve Force	AP ^b	Caribbean Def. Force	BDD	Headquarters and Field Activities	CH ^b
Other Theater Force	AZ	Missile Forces	BM	Theater Support	CO ^b
Other Deployed Force	AZ ^b	NATO Missile Force	EME		
Other Theater Res. Force	AZC	Pacific Missile Force	BM ^b		
Strategic Reserve Force	AV	CONUS Missile Force	BMC		
Active Strategic Res. Force	AVC	Strategic Intelli- gence and Security	BI ^b		
Reserve Components		Strategic Communi- cations	BC ^b		
RC NATO Force	AVE	DOD-Joint Activities	BJ ^b		
RC Pacific Force	AVQ	Other Service Support	BG ^b		
RC Other Force	AVX	Free World Support	BF ^b		
Unmanned Strategic Reserve Force	AUX				

^a Initial Support Increments and Sustaining Support Increments.^b Location may be indicated by third digit; e.g., C = CONUS,
H = Hawaii, M = Middle East.

relatively straightforward derivation of the LFCS troop lists TOE/TDA strengths and ALO assigned to each force package and category. The unit structure and manpower strengths of Categories A and B are relatively independent of each other and are related to Army strategic and mission considerations, as decided at the Army Secretariat/Chief of Staff level. However, the unit structure and manpower strength of Category C depends directly on the force program content of both Categories A and B, as well as on the sum of all four categories for those general support functions that may be strength-dependent.

It was stated previously that the LFCS is a nonfinancial system. However, various LFCS formatted outputs (i.e., troop lists, manpower programs by commands, military end strength summaries, etc) provide the military input for the other financially oriented program classification structures (Fig. C-6) through the functional appropriations and program directors.³⁶ By means of the FPLAN-UIC-AMS codes associated with TOE/TDA units in force programming, unit-related military manpower can be readily reaggregated and translated to the FYDP-FGC classifications at PE level, or transposed back to the LFCS categories.

The unit-force package orientation of military manpower programs derived from the LFCS structure, together with its nonfinancial nature, does facilitate considerable programming flexibility. Units can be deleted, shifted, or added, or the ALO changed among the force package "windows" within the predetermined end strengths of the LFCS categories. Aggregated officer-enlisted manpower program changes can be derived directly from these troop list changes, in most cases. Because of the way in which military manpower is aggregated, the matter of functional military occupational specialties (MOS) skill levels and grade spreads related to the military manpower spaces in these unit aggregations is not addressed in force structure and military manpower authorization programming. These functional aspects of military manpower spaces are not considered and coordinated until fairly late in the programming cycle when the Army staff capabilities study³¹ is made of the budget year Army Force Program (AFP).²² (See App D.)

Summary

The use of the multiple program classification structures in Fig. C-6 is a major aspect of the DOD-DA methods of control on manpower programming.

Each of the programming classification systems examined in the foregoing discussion fulfills a different function at various points in the PPBS cycle. Despite the elaborate detail and extensive coordination required in the FYDP, FGC, and AMS structures, the relation between military and civilian authorizations and costs (TOA) is obscure. The LFCS structure closely relates force programming and military manpower programming. However, military manpower data and information in the FYDP, FGC, and AMS is not comparable with that for civilian manpower, owing to the fundamentally different ways in which authorizations are developed and allocated in response to DA management controls. The volume and extent of data detail in the multiple program classification structures, in conjunction with the extensive coordination requirements imposed by DA management controls, are critical to efficient manpower programming and effective staff response to DA management manpower information needs in the PPBS cycle. Serious internal DA constraints of process complexity and time contribute further to this condition.

Appendix D

THE CURRENT SYSTEM FOR MANPOWER PROGRAMMING

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GENERAL

The material in this appendix supplements Chap. 2. It should be reviewed in conjunction with the analysis of the controls and constraints on Army manpower programming contained in App C.

By means of a task analysis of the current system operations, the dissimilar military and civilian manpower programming paths in the Planning, Programming, and Budgeting System (PPBS) cycle initiated in CY70 are identified. The principal problems and deficiencies identified here provide the basis for the general approach to integrated manpower programming and the methodological concept outlined in Chaps. 3 and 4 respectively.

Owing to IMP-I time and study resource limitations, it was not possible to compare the manpower programming operations examined herein with those in the subsequent cycle for the Army POM FY73-FY77 and FY73 program and budget formulation which was in process during the concluding phase of IMP-I. Informal information from Office of the Assistant Chief of Staff for Force Development (OACSFOR) sources indicated, however, that only relatively minor changes in procedures and timing were involved. Thus the major phases, events, and programming operations to be described are considered current as of July 1971.

SYSTEM TIME-FUNCTION PHASING

The current manpower programming process is best described as a system comprised of two subsystems whose particular elements (tasks) are related by time and function. As outlined in Chap. 2, the first grouping of tasks related to the manpower programming process is described as the

Program Development Phase. The Office of the Secretary of Defense (OSD), Joint and Department of the Army (DA) strategic planning and conferences concerning force and resource requirements preceded this phase and generally covered the period June-December 1969. The revised DOD PPBS programming procedures then began in January 1970 and extended through mid-May for the detailed development of the Army's fiscally constrained force structure and projected military and civilian manpower authorization programs required for the Army Program Objective Memorandum (POM) 72-76.

The Program and Budget Formulation Phase includes those programming tasks required to translate the OSD decisions on the Army force structure and military and civilian manpower programs in the POM into the budget submissions to OSD, Office of Management and Budget (OMB), the Executive Office, and Congress. Also included within this phase of the system was the monitorship and management of the current year (FY71) and budget year (FY72) Army Force Program (AFP) and related military and civilian manpower programs through the development and dissemination of DA Program and Budget Guidance (PBG),¹⁸ the processing of Manpower Vouchers,^{7, 37} and the disposition of unprogrammed manpower actions. The time span covered by this phase was from mid-May 1970 to June 1971.

SYSTEM NETWORK AND PROGRAMMING PATHS

To aid in the description of the manpower programming system, two graphic representations are included as Figs. D-1 and D-2. The task relations that evolved during the two phases are shown in Fig. D-1 in network form. The circles in Fig. D-1 represent organizations and organizational elements; the lines between circles represent the activity performed by the preceding organization. These will be referred to as task and referenced throughout the system description. Figure D-2 shows the time-based organizational responsibilities, staff actions and coordination, and resultant outputs involved in the development of the FY72 force structure and manpower programs, with emphasis on OACSFOR Manpower and Forces Directorate (MFD) organizational elements.

PROGRAM DEVELOPMENT PHASE

The preliminary strategic and broad resource planning aspects leading to this phase are represented at the beginning of the system network in Fig. D-1, to indicate the relation to program development. This description is an extension of the revised DOD PPBS procedures outlined in Chap. 2 and analyzed in network form in App C (Fig. C-2).

Tasks 1-2. Strategic and resource planning began with the preparation of the JSOP-I, by the JCS. JSOP-I provides the JCS statement of national security strategy and supporting military objectives. Although OACSFOR makes no direct input into JSOP-I, Force Development Plans Division (FDPD),* as the OACSFOR point of contact, was responsible for staffing the document within OACSFOR. JSOP-I was reviewed in OSD, which then issued DOD policy guidance on strategic concepts for comment by the JCS.

Tasks 3-4. After consideration of the JCS response, OSD issued the final SGM. JSOP-I and the SGM served as the planning basis in the preparation of JSOP-II and the JROD, as well as in the preparation of the JFM.

Tasks 5-6. FDPD structured several alternative objective forces and the accompanying rationale for Army forces and force tabulations as part of the ACSFOR input for the ASOP. Alternative force structures were developed, in part, by performing successive runs of the automated Force Accounting System (FAS)²⁶ under varying parameters. The FAS also has the capability of maintaining "packaged" force structures on file. During force planning, the FAS planning file is updated frequently to keep abreast of force structure changes. The ASOP sets forth the force objectives and serves as the basic resource requirements planning document of the Army Planning System.¹³ The primary purposes of the ASOP are (1) to determine the force levels and resource requirements necessary to support the strategy presented in JSOP-I and (2) to develop Army input to JSOP-II (Analysis and Force Tabulations).

Tasks 7-11. FDPD also had responsibility for the preparation of the force structure development concept as part of the AFDP-I. The DA

*All staff divisions and branches referred to are part of MFD OACSFOR, unless otherwise stated.

PROGRAM DEVELOPMENT (THROUGH POM) PHASE

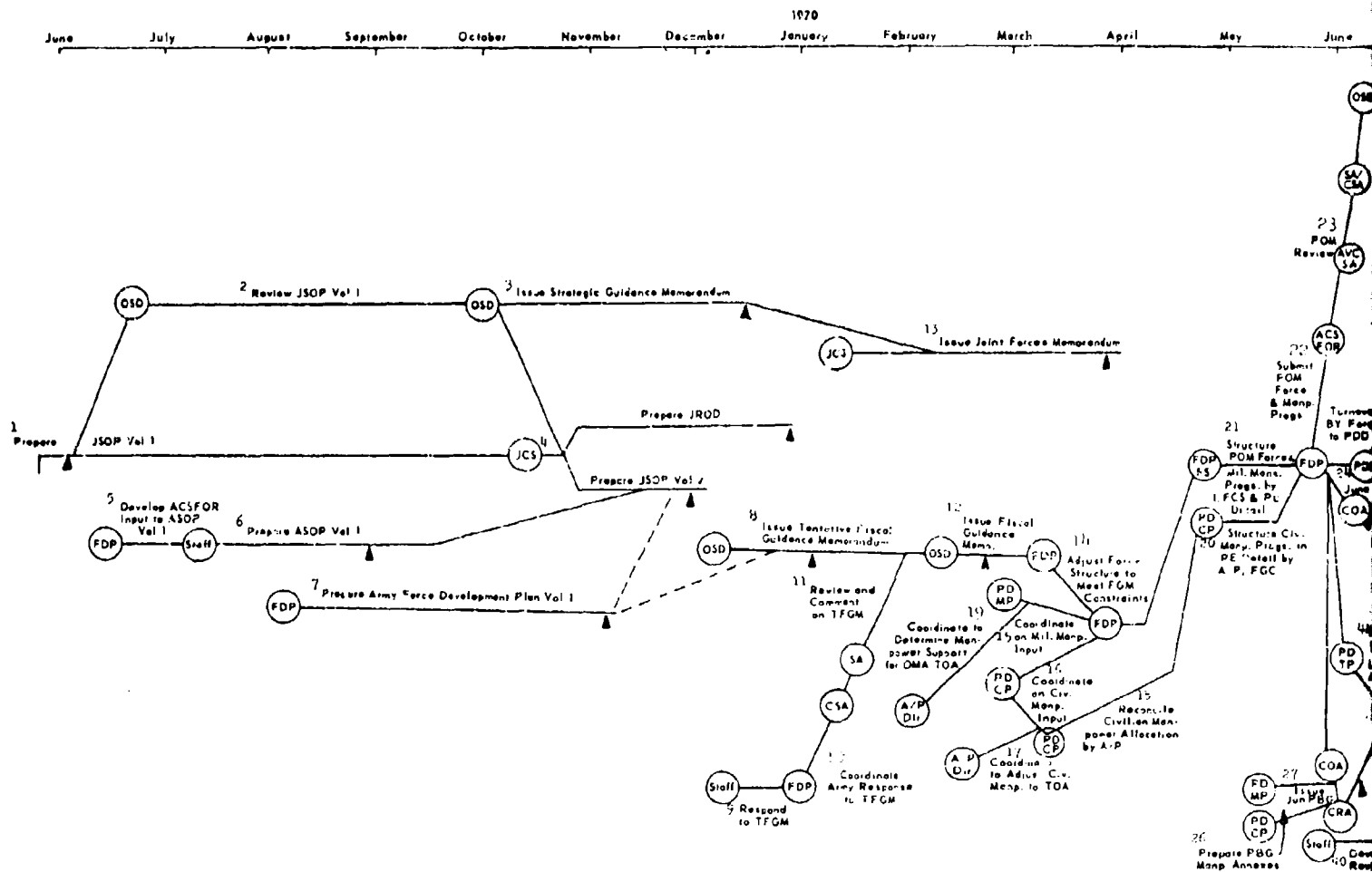


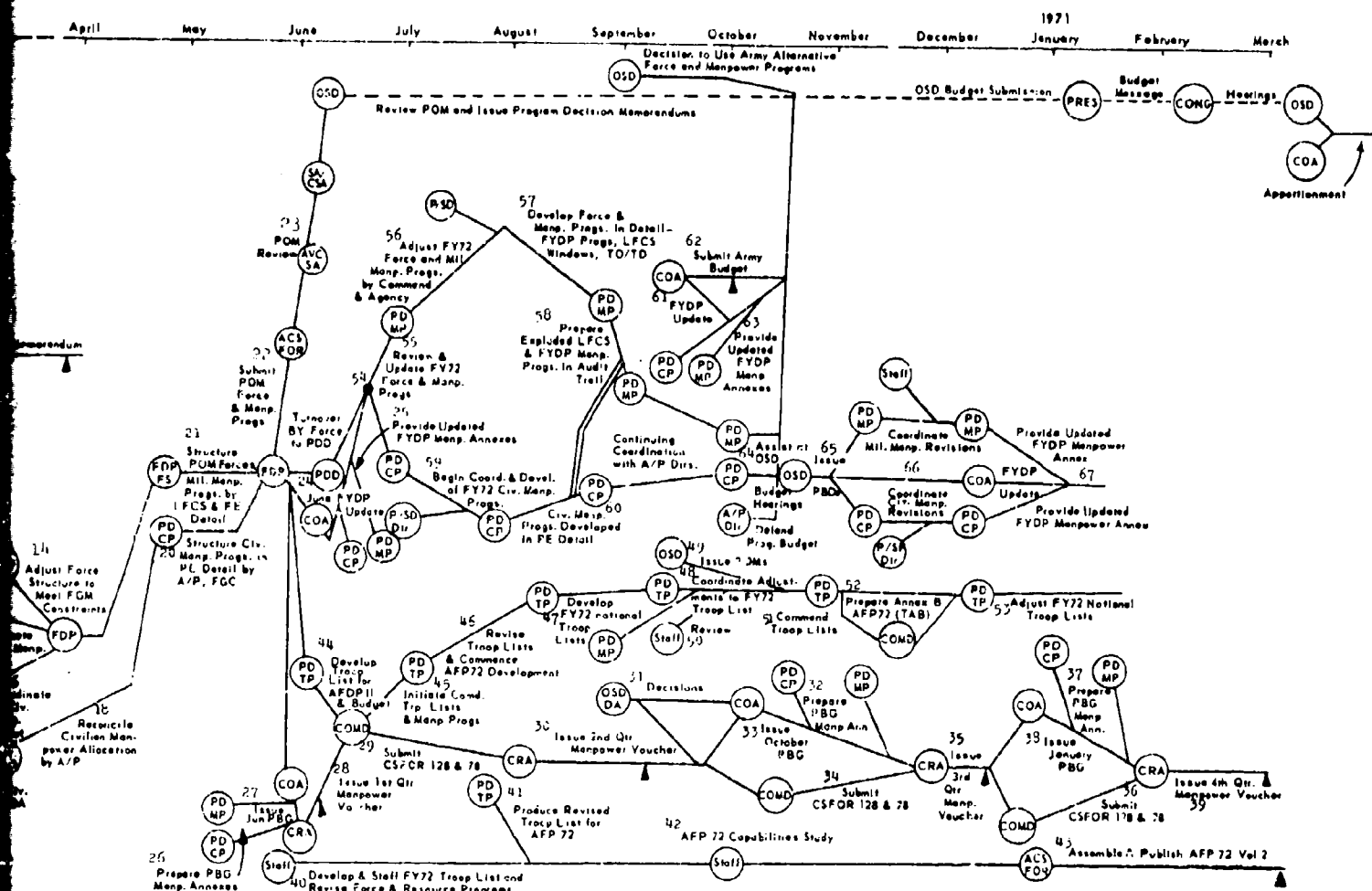
Fig. D-1—Task Relations in the Development of the BY72 Force Structure and M

Activity Designations

- ACSFOR - Assistant Chief of Staff for Force Development
- AVCSA - Assistant Vice Chief of Staff, U.S. Army
- AP DIR - Appropriation and Program Directors
- ASOP - Army Strategic Objectives Plan
- COA - Comptroller of the Army
- CONG - Congress
- COMD - Field Commands
- CRA - Command Requirements and Allocation Division
- CSA - Chief of Staff, U.S. Army

FCP - Force Development Plans Division
FDP-FS - Force Structure Br
FYDP - Five Year Defense Plan
JCS - Joint Chiefs of Staff
JRQD - Joint Research and Development Objectives
JSOP - Joint Strategic Objectives Plan
LFCS - Land Forces Classification System
OSD - Office of the Secretary of Defense
PDCCP - Civilian Programs Br

PROGRAM AND BUDGET FORMULATION PHASE

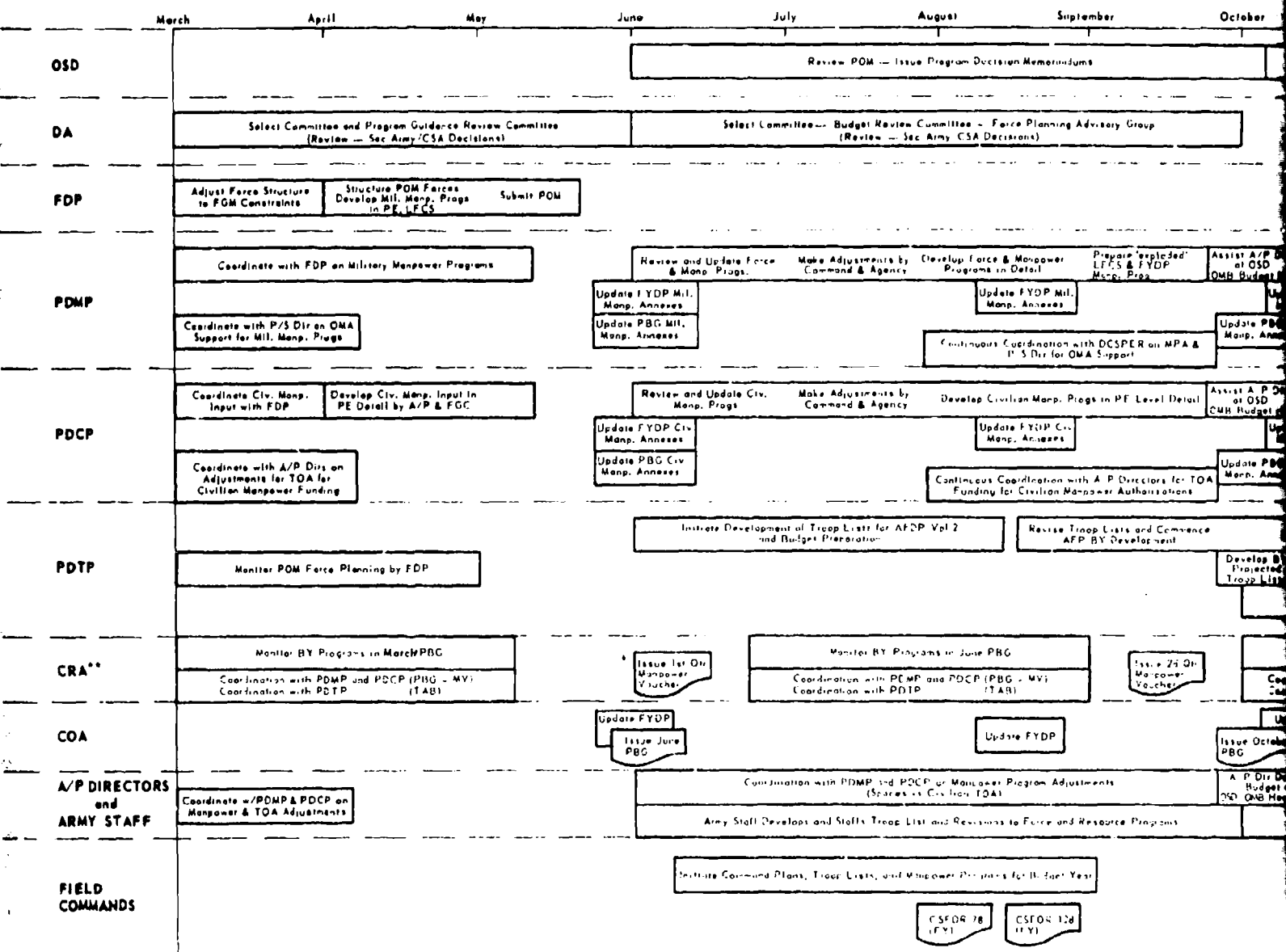


of the BY72 Force Structure and Military and Civilian Manpower Programs
 numbers of tasks, described and discussed in the following pages.

Activity Designations

- Force Development Plans Division
- Force Structure Br
- Five Year Defense Plan
- Joint Chiefs of Staff
- Joint Research and Development Objectives Document
- Joint Strategic Objectives Plan
- Land Forces Classification System
- Office of the Secretary of Defense
- Civilian Programs Br

PDB - Program Budget Decision
PDD - Program Development Division
PDM - Program Decision Memorandum
PDMP - Military Programs Br
PDTP - Troop Programs Br
PRES - President
PS Dir - Program and Subprogram Directors
SA - Secretary of the Army
Staff - Army Staff

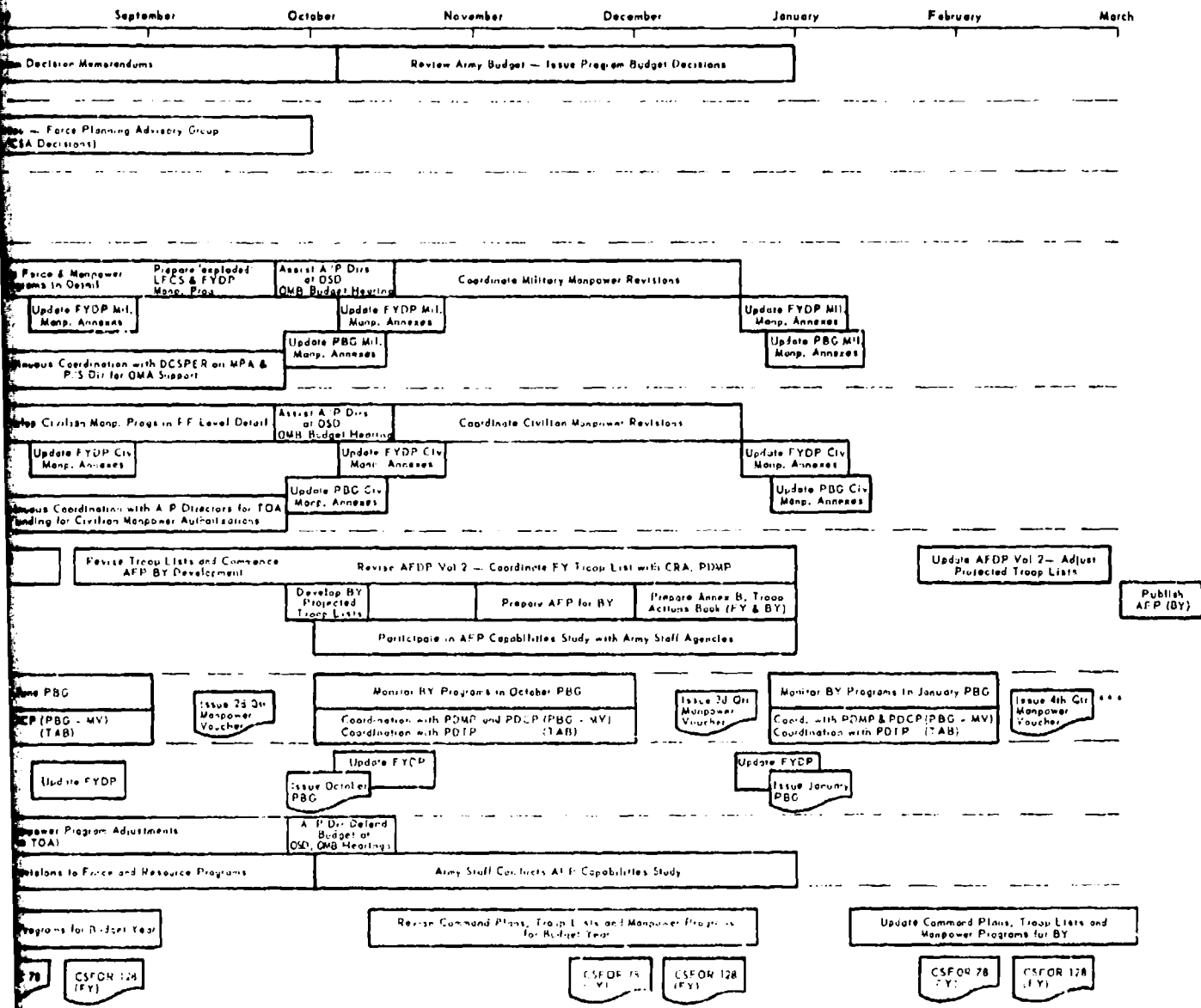


* Begin new fiscal year and budget year.

** Adjusts the command manpower allocations on a continuing basis as decisions are made by DA Staff representatives.

*** Last of current fiscal year.

Fig. D-2—Organizational Responsibilities in the Development of the BY72 Force Structure and



ent of the BY72 Force Structure and Military and Civilian Manpower Programs

11-6A

objective for AFDP-I is to postulate an Army with a structure of balanced combat, combat support, and combat service support force and an overall balance between structure, manpower, modernization, and readiness. The FAS also supports this effort. The AFDP-I was published in November so as to influence the JCS preparation of JSOP-II in December and the OSD formulation of the TFGM in January 1970. FDPD is responsible for coordinating the DA response to the TFGM within the Army staff and forwarding the recommended DA position to CSA and Secretariat levels for review and decision.

Tasks 12-13. The final FGM was issued in early March. As described in App C (Table C-1) the FGM established the fiscal constraints applicable for the development of the Army POM force and programs. It was also the basis for the JCS formulation of the JFM.

Tasks 14-16. Based on the FGM, FDPD adjusted the AFDP-I Army force structure to fall within the boundaries of the FGM constraints and the related Army Secretariat-CSA guidance and allocation decisions. Manpower program coordination was effected by the FDPD FDP-FS with the PDMP and PDCP of PDD.

Tasks 17-18. PDCP was provided with the force structures, deployments, and associated military manpower aggregations prepared by FDP-FS for the POM forces. A current FYDP civilian manpower printout was also obtained from the COA.³⁶ All this material was analyzed by PDCP in light of policies and guidance for POM development from the SELCOM,⁸ PGRC,⁹ and AVCSA. PDCP developed an initial "first-cut" approximation of civilian manpower space and cost allocations distributed by appropriations and budget programs and FYDP programs. Concurrently, COA had furnished Army staff appropriations and program directors with the Total Obligational Authority (TOA) allocations applicable to their particular appropriations and programs (App C). PDCP coordinated the initial civilian manpower space and cost allocations spread with each appropriation and program director to reconcile and adjust civilian spaces and costs with the TOA allocated to each appropriation and program by COA.

Task 19. Based on similar guidance to that furnished PDCP (Task 17 above) and a current FYDP military manpower printout, PDMP interacted

with FDP-FS to derive military manpower allocation inputs in the LFCS trained-strength categories of the force structure and in FYDP program summary form. PDMP also provided a military manpower LFCS trained-strength breakout to ODCSPER (MPA Appropriation Director) for computation of MPA costs. In this process ODCSPER also computed and added in the nonstructure individual manpower account (LFCS Category D: transients, trainees, patients, prisoners, students, cadets, etc). PDMP coordinated with ODCSPER in subsequent adjustments of military manpower and man-years relative to the initial TOA allocation for the MPA Appropriation. PDMP further coordinated with operations and maintenance, Army (OMA) (and FYDP) program and subprogram directors on military manpower strength allocations relative to OMA program TOA adequacy for support of force structure military manning levels and proposed total end-strength authorizations.

Task 20. Following civilian manpower and TOA adjustments with appropriations and program directors, PDCP developed the civilian manpower programs by major command and agencies in PE detail for the budget year (FY72) and 4 out-years (FY73-FY76). This extensive manual process was based on current fiscal year civilian end strength, projected civilian man-years, average salaries, and expected salary increases related to each of approximately 145 PEs applicable to each type of civilian manpower (US and foreign national direct hire and indirect hire, graded, and wage board) in the Army Management Structure (AMS)-FYDP-FGC (Fiscal Guidance Category) classifications. Civilian manpower allocations and costs at PE level were developed for each of the cases prescribed for the Army POM by the OSD FGM.

Task 21. Concurrent with Task 20, FDP-FS in coordination with PDMP structured the POM forces in detail and developed the POM military manpower programs in LFCS categories and in PE detail for each LFCS structure category and FYDP program. FDPD was the designated OACSFOR organizational element for coordinating and integrating the preparation of the POM throughout the Army staff prior to its review by AVCSA.¹² (See also Chap. 2, Fig. 2-2C, and App C, Fig. C-4.)

Tasks 22-23. The submission of the Army POM FY72-FY76 in mid-May generally concluded the Program Development Phase, although continuing

adjustments in POM force and manpower programs were made as a result of Army Secretariat-CSA review, before transmission of the POM to OSD by the Secretary of the Army.¹⁶

To obtain clarity of the graphic presentation in Fig. D-1, it was necessary to represent the operations, programming activities, and organizational interfaces as one-time events. In actuality, numerous iterations and recycling of these various tasks occurred over the time span covered by the receipt of the OSD FGM through final POM submission to OSD. For example, at least 15 editions of the "Force Structure Account Display" (Table C-2, App C) were disseminated by the PGRC³³ as changes in guidance to one or more of the required POM programs (i.e., base case, Army alternate, decremented). This iterative programming requirement stemmed from the frequent SELCOM-PGRC program development reviews and Secretariat-CSA management reviews (Fig. D-2) resulting in reallocation of forces and resources.

PROGRAM AND BUDGET FORMULATION PHASE

Tasks 24-25. Within OACSFOR the Program and Budget Formulation phase began with FDPD passing responsibility for subsequent detailed development of the budget year (FY72) force program and military and civilian manpower programs to PDD, concurrent with the June FYDP update.

During the program and budget formulation phase, the OACSFOR-MPD programming effort had two principal purposes with respect to force structure and military and civilian manpower programs. First was the finalization of the budget year (FY72) force structure and the initiation of detailed program distribution of military and civilian manpower authorizations for the budget year force as an input to the preparation of the Army budget submission under COA-BRC.

The second main purpose was the monitorship and management of the current FY71 force and military and civilian manpower authorizations so as to attain directed -- and frequently changing -- Army year-end strengths. At the same time there was the need for continuing detailed adjustments to the budget year force troop lists and manpower programs. This ensued from the results of capabilities studies, the interchange of HQ DA guidance to the field and subsequent command responses, and DOD-DA budget reviews and decisions.

To display graphically the interdependencies of the numerous activities required to achieve these two purposes above -- even at an aggregate level of detail -- exceeds the capabilities of any one chart or diagram. Hence, the use of both Fig. D-1 and Fig. D-2 to display the process.

Figure D-1 delineates the principal tasks in the network which separate the program and budget formulation phase into several paths of related events. These paths -- moving from the bottom of Fig. D-1 to the top are:

- (1) (Tasks 40-43), the Army Staff Force Program Capabilities study for the budget year force.^{22, 31}
- (2) (Tasks 26-39), the PBG¹⁸ and Manpower Voucher cycle.^{7, 37}
- (3) (Tasks 44-53), the development and subsequent updating of DA and command plan troop lists.^{14, 22}
- (4) (Tasks 54-67), the process of programming military and civilian manpower spaces for the budget submission and the adjustments made to reflect OSD PBDs.¹⁷

Figure D-1 sequentially reflects the critical events occurring throughout the program and budget formulation phase, and Fig. D-2 aligns the organizational responsibilities of the agencies involved in a proper perspective. The latter more clearly represents the high degree of coordination and information flow required between organization elements -- both internal and external to ACSFOR -- and also the cyclic occurrence of many of the events connected with the development of the budget year force and manpower programs and management of the current year force and manpower. This figure, in particular, will be referred to in describing the various points of the ACSFOR Force Development Management Information System (FDMIS)²⁰ interface in the manpower programming process.

Army Force Program Capabilities Study

Tasks 40-43. As shown in both Figs. D-1 and D-2, the Army staff conducted the AFP capabilities study throughout the program and budget formulation phase. Among other things the study is a coordinated staff analysis of the Army's ability to provide trained military personnel and materiel to fulfill budget year force and manpower authorization programs. A principal vehicle was the revised DA troop list inputs supplied

(Task 41) by PDTP to Office of the Deputy Chief of Staff for Personnel (ODCSPER) and Office of the Deputy Chief of Staff for Logistics (ODCSLOG).
Program Budget Guidance and Manpower Voucher Cycle

Tasks 26-28. The cycle begins with the June PBG manpower annexes update accomplished by PDD (PDMP and PDCP) and the issuance of the June PBG. This action updates the new fiscal year manpower programs and provides the initial projections for the coming budget year to the field. Preceding this action Command Requirements and Allocation Division (CRA) had issued the first quarter manpower voucher (MV) (July-September) for the new fiscal year military and civilian manpower programs. Thus in June 1970 the first quarter MV was issued for FY71, and FY70 was closed out. Monitorship of the BY72 programs continued under PDD. The quarterly MV reflects all DOD-DA manpower decisions and unprogrammed changes approved subsequent to the last PBG edition. Manpower decisions reflected in a given quarterly MV are carried forward to the subsequent PBG (see Fig. D-2). Thus the MV provides an audit trail by identifying and recording all decisions and reprogramming actions in detail. As shown in Fig. D-2, CRA coordinates the MV with PDMP and PDCP to keep the PBG manpower annexes and MV system in track with each other. Unit manpower changes reflected in the MVs are also coordinated with PDTP, relative to the quarterly TAB for the current fiscal year and the budget year AFP.

The MV system is entirely manual. Each quarter some 235 MVs are calculated and distributed as follows: major commands, 25; DA field activities, 50; Army elements of DOD joint activities, 160.

Task 29. In response to the quarterly MV, each vouchered command and agency is required to submit the CSFOR-128³⁸ and CSFOR-78³⁰ reports to CRA. The CSFOR-128 Report is a manual report reflecting how the current fiscal year bulk military and civilian spaces allocated by DA Manpower Vouchers were distributed to the TOE/TDA units in the reporting command, down to unit identification code (UIC) level. The report displays various categories of military and civilian manpower in terms of current quarter authorizations and personnel utilization information. There is no association of either military or civilian data in the CSFOR-128 Report with AMS or FYDP PE codes. Conversely the CSFOR-78 Report (Part A) does reflect current year military and civilian manpower

by AMS code, function, and related workload factors, as well as civilian dollar costs, but with no UIC association.

The command or agency totals on the quarterly CSFOR-128 and CSFOR-78 reports must balance with the corresponding MV. CSFOR-128 is used as a source of current manpower distribution information by the Army staff and Secretariat. CSFOR-78 is generally submitted in automated form by commands but is manually maintained by CRA, with no automated storage or data retrieval available. Civilian costs and workload data from the CSFOR-78 are also used by other MFD activities such as PDD and Utilization and Standards Division (US).

Neither the MV nor the two associated reports above are directly involved in the ACSFOR FDMIS. The MV does serve ultimately to trigger action documents from the field which are processed through The Army Authorization Documents System (TAADS)²³ and eventually reflected in the TAADS file (if the MV action causes a change in end-year strength). This does create a time discrepancy between what is reflected in the TAADS files vs the manpower allocated by current MVs. Moreover, since the MV does not contain either FYDP PE or AMS detail, it does not provide input data for the update of either the FYDP manpower annexes or the quarterly AFP TAB.

Tasks 30-39. As the fiscal year progresses, CRA coordination with PDD on the budget year programs becomes more detailed in preparation for the next June PBG update and the new PBG-MV cycle. The tasks described above for the first quarter PBG MV (Tasks 26-29) are repeated for the second, third, and fourth quarter MVs and shown as Tasks 30-39 in Fig. D-1.

Development and Updating of the DA and Command Troop Lists

Tasks 40-46. The major functions of developing, analyzing, and producing the DA Troop Lists for the current and budget year force structure was begun in June by PDTP following the turnover of responsibility for the POM budget year force and military and civilian manpower programs to PDD. Whereas the PBG and its manpower annexes reflect projected unit actions schedules, aggregated manpower spaces, and fiscal data for each major command and agency, the AFDP-II and AFP detail military manpower strength on a UIC basis in the form of troop lists.

As the AFDP-II and the AFP undergo revision during the staff capabilities study (Tasks 40-43), these troop lists are continually refined in interaction between the DA and the field commands. These troop lists are reflected in AFP Annex B TAB, which is updated quarterly. This is accomplished by the FAS, which receives input from TAADS and other sources (e.g., command plans and related troop lists).

Civilian manpower spaces as well as military are reflected in the DA troop lists. However, the data on civilian spaces are derived from command plan inputs and TAADS TDA files rather than input directly from PDGP. Civilian spaces are aggregated to the UIC level in the troop lists and are not broken out in PE detail below the major PE associated with the UIC.

Tasks 47-50. PDTP develops "programming assumptions" troop lists to reflect the tentative DA unit allocation of directed bulk military manpower changes and reductions to selected representative units in the field commands resulting from DOD-DA decisions. However, the programming assumptions do not reflect how the commands actually allocate manpower changes to their units. This is derived by PDTP from subsequent command plan troop list submissions and approvals. PDTP maintains coordination with PDMP as revisions are made to the DA troop lists. Adjustments to these troop lists are also made for all applicable OSD PDM issued during the period between POM review and initial budget submission. Continuing coordination of these adjustments is also required with other Army staff agencies concerned.

Task 51. The command troop lists developed by PDTP do not reflect actual manpower distribution in the field. Rather they are used to maintain a force structure that reflects DOD-DA unit and military manpower decisions pending responses from commands. The "real-world" troop list composition and UIC manpower strengths are strongly influenced by the command plan inputs to DA. The troop lists developed and used by PDTP are maintained within the FAS, through coordination with MF-FA. Unit and military manpower changes to FAS troop list printouts are sent to FA and updated in the FAS by US Army Management System Support Agency (USAMSSA).

Tasks 52-53. As shown in Fig. D-2, the AFP-72 was to be published in March 1971 following the Army staff capabilities study and updated quarterly throughout the year of execution through the TAB.*

Military and Civilian Manpower Programming Paths

Following the June FYDP update for which they provided the updated FYDP military and civilian manpower annexes, PDMP and PDCP concurrently (see Fig. D-2) initiated programming of manpower inputs for the October Army budget submission and preparation of the June PBG manpower annexes.

Tasks 54-55. In Fig. D-1, two paths are shown which separate at point 54, indicating the independent operations involved in programming military manpower and in programming civilian manpower during program and budget formulation. Referring to the upper path, which depicts the operations and coordination performed by PDMP, the FY72 force and military manpower programs are received (Task 55) and broken down in three separate ways:

(1) By FYDP PE detail, with military manpower distributed to the 10 FYDP programs.

(2) By LFCS categories, with manpower distributed by force plan codes (FPLAN) to commands and agencies.

(3) By LFCS force structure TOE/TDA spaces, authorized level of organization (ALO), and related trained-manpower end strengths.

Tasks 56-57. PDMP analyzed these breakdowns from the June FYDP update across the board for all FYDP programs and by LFCS unit and military manpower allocations to Army commands and agencies. Adjustments were made to reflect all DOD-DA policy changes, force structure, and manpower decisions and other factors that had ensued since the POM force structures and manpower programs were submitted. These changes were quite numerous owing to changing TOE/TDA and end-strength decisions, TOA redistributions, and structure additions and deletions affecting the FY72 force in different programs and categories. Throughout this period, continuing coordination was effected with appropriate staff OMA program and subprogram directors for their evaluation of the adequacy of OMA resources to support military strengths (see Fig. D-2). Concurrently,

* In actual fact, this schedule was not met for AFP-72, owing to various slippages and administrative problems within HQ DA.

PDMP initiated action on the subsequent update of the PBG and FYDP military manpower annexes.

Task 58. PDMP consolidated all military manpower programs for the current fiscal year and budget year in a worldwide "exploded" LFCS structure, matched with the corresponding force structure and DA troop lists prepared by PDTP. The "exploded" LFCS displayed by quarter all current year and budget year military manpower and manning levels (ALO) by command, agency, and geographic location in audit trail detail (i.e., LFCS FPLAN code) as well as in PE audit trail detail by FYDP programs.

The foregoing traces the military manpower programming path to the double bars in Fig. D-1. Returning to point 54, the civilian programming path, commencing with the June FYDP update, is next considered.

Tasks 59-60. The civilian manpower programs used the FY72 segment of the June FYDP as the point of departure. As shown in Fig. D-2, PDGP also was involved throughout the programming process in the updating of both the FYDP civilian manpower annexes and the PBG civilian manpower annexes. Coordination was necessary throughout this period with appropriations and budget program directors concerning changes of civilian man-years relative to TOA availability. The civilian manpower programs were developed in the same PE level of detail for the budget submission as was accomplished for the POM. These were then cast in AMS appropriation and budget program terms.

Late in September 1970 was the first time in the program and budget formulation phase that civilian and military manpower data were available for analysis on a comparative basis in PE detail within ACSFOR-MFD. This is indicated in Fig. D-1 by the translation path (double bar) between the military and civilian manpower programming paths. Under current practices this represented the only feasible point at which military and civilian tradeoffs could be logically made within existing allocations to commands and agencies. Several factors operated to minimize the validity of military and civilian comparison at this point, however. Among these were (a) the relatively "locked-in" status of the force and deployments, related military strength allocations, and MPA TOA; (b) the differing bases of computation of military and civilian manpower content in FYDP program elements throughout preceding programming

operations; and (c) the volume of detail and manual processing involved in making such comparative analysis relative to the critical time constraints on Army budget preparation.

Tasks 61-64. The schedule for issuance of OSD PDM on the POM programs (Fig. D-1) was not met by DOD. Instead, in September 1970 DOD directed HQ DA to use the Army POM alternative force and manpower programs as the basis for the development of the initial Army FY72 budget submission. Owing to the continuing unprogrammed changes and detailed DOD-DA changes in current FY Army units, manpower, and funding, a major effort was necessary by PDD programming activities to make detailed adjustments in the budget year troop lists and military and civilian programs submitted to DOD for the POM alternative case. After effecting the additional coordination necessary with program and subprogram directors and ODCSPER (military manpower programs only) and BRC-SELCOM-Secretariat review, changes, and approval, the detailed PDD military and civilian manpower programs provided input to COA for the October Army budget submission and the October PBG.¹⁸ The FYDP was updated to reflect the Army budget submission with PDMP and PDCP again developing the update inputs to the manpower annexes.³⁵ PDMP and PDCP then participated in and assisted the Army staff appropriations and program directors at the DOD-OMB budget hearings on matters related to force structure and military and civilian manpower authorization programs.

Tasks 65-67. Following the budget hearings, OSD issued PBDs (Fig. D-2) to reflect changes required to the Army budget to be incorporated in the Defense budget for submission to the OMB. PDMP and PDCP coordinated with the pertinent appropriations and program directors on the budget program revisions required where manpower was affected by the PBDs. These changes were then reflected in the January 1971 FYDP update (Task 67) and the January PBG (Task 37). Subsequent to this point in program and budget formulation, budget year manpower activities in PDD shifted to emphasis on detailed reprogramming actions resulting from the AFP-72 development, DA approval of command plan program inputs, and changes stemming from Congressional actions on the budget submission. Although not shown on Figs. D-1 or D-2 for purposes of clarity, this period of the FY72 program and budget formulation phase after January

was overlapped by initiation of the program development phase for the next annual cycle with the DA response to the OSD tentative fiscal guidance issued for FY73-FY77.

It should be noted that, as was the case in the preceding program development phase, both military and civilian manpower programming tasks described above for the program and budget formulation phase are essentially manually performed. The PDD interface with the FDMIS (FAS) was principally by means of computer-produced detailed data listings.²⁶ These were used as the basis for manual calculation of various updates, programming extrapolations, and information summaries to higher echelons of OACSFOR and DA management.

EVALUATION OF PROGRAMMING SYSTEM OPERATIONS

Environment of System Operations

The preceding analysis highlights the extremely complex organizational and management environment within which current manpower programming operations are performed under the DOD-DA controls and constraints and diffusion of HQ DA responsibilities (Chap. 2 and App C). Within the scope of EMP-I and the governing study condition stated in Chap. 1 (no change in OSD management and controls can be assumed), the DOD aspects of this environmental complexity are regarded as immutable. However, it is recognized that these aspects do impose additional and increasingly stringent problems on all levels of HQ DA from high-echelon management through functional staff agency heads to programming activity elements.

It is also beyond the EMP-I purview to address the overall organization, functions, and direction of HQ DA and the Army staff. At the same time these considerations of internal DA compartmentalization and complexity bear strongly on the efficacy, shortcomings, and problems of current military and civilian manpower programming system operations within OACSFOR-MFD.

Concomitantly the differing planning-programming approaches, organizational responsibilities, and practices within MFD are also considered as contributing factors to the system environment, as discussed subsequently.

Programming Turbulence

There is a continuous flux of DOD-DA management "decisions in detail" affecting the current year and budget year force and manpower programs. This creates a high degree of turbulence in manpower programming operations within OACSFOR; for instance, in the volume of changes required in the periodic updates of the FYDP and PBG manpower annexes; the changes occurring between the submission and approval of the POM programs and subsequent budget program formulation; the AFP troop list revisions and the changes summarized in the quarterly MVs. All the foregoing occur at different times in the PPBS cycle, and each affects the others. This condition imposes a vast job of detailed staff coordination and data management to keep all these detailed changes in track with each other in the various ways in which they must be recorded in the various program classification structures. During the IMP-I interview program, it was estimated that these detailed decisions affecting the current and budget year programs may average as high as 150 per month.

The other side of the decision problem is a lack of major decisions essential for firm premises from which to project force and manpower programs. An example might be the absence of a timely decision on what the current year manpower end strengths and force composition of the Army are to be, as the logical starting point for developing the budget year and out-year programs.

The intense difficulties confronting the higher echelons of the DOD and DA in making these major decisions under the existing dynamics and uncertainties of domestic and international affairs and changing national policies are understandable. However, lacking such decisions, resource and manpower programs must be developed from various assumptions regarding the current force and manpower authorizations. In view of the great amount of detail subsumed in present programming procedures, as these assumptions frequently change, reprogramming turmoil results. Questionable validity of resultant programs would appear to be a probable consequence.

Figure D-3 provides a general overview of the relation of the DOD-DA decision process to the principal ACSFOR FDMIS authorizations data systems, TAADS and FAS. When considered from the viewpoint of too

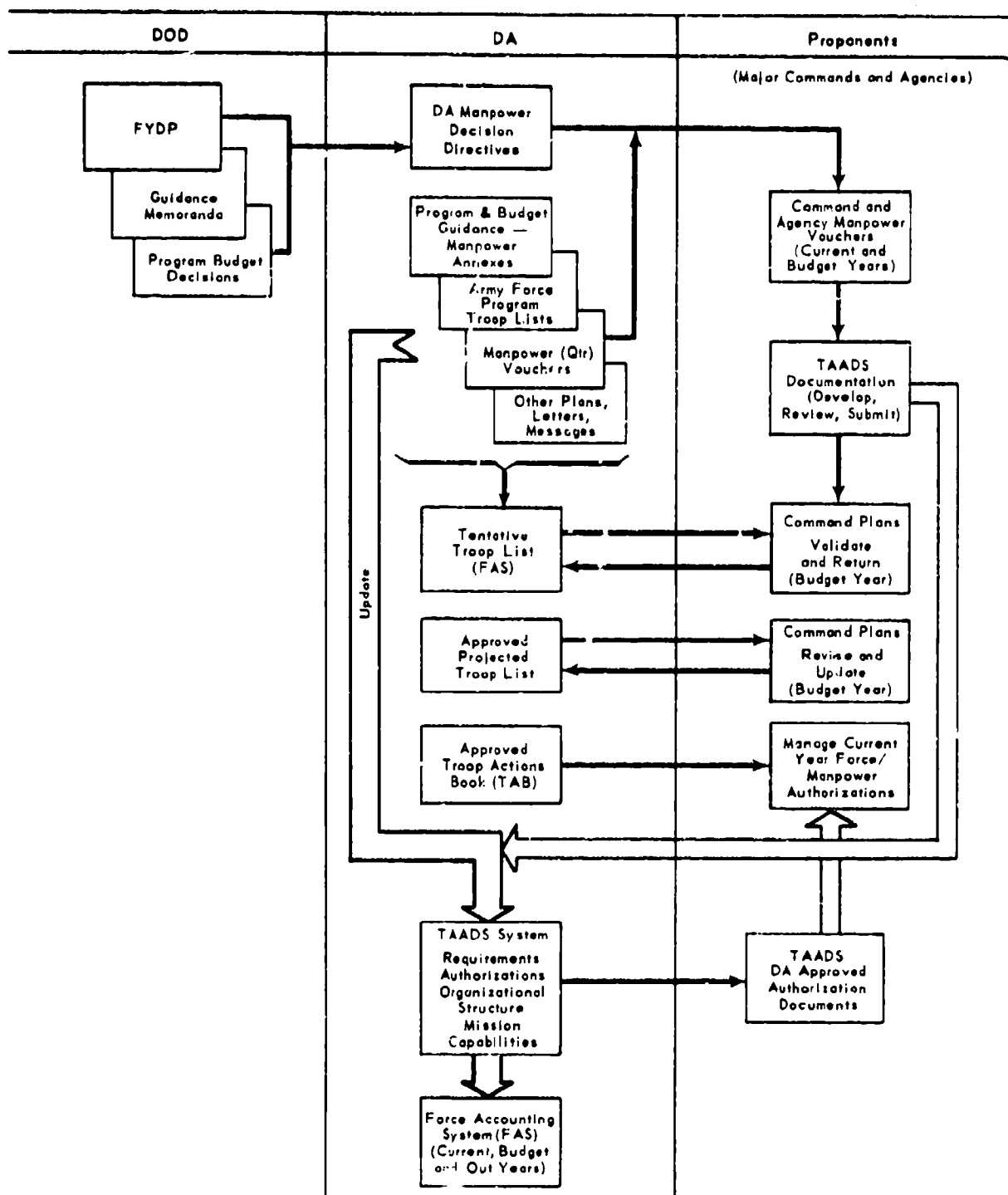


Fig. D-3—Relation of DOD-DA Decision Making to the Army's Force and Manpower Authorizations and Accounting Systems

many decisions, these key systems can become saturated with unprocessed inputs resulting from the many authorization changes required. This condition can be further compounded by the time it takes the field commands to respond with appropriate inputs to DA-directed manpower authorization changes in MV or PBG. Conversely the lack of decisions mentioned earlier can also diminish systems effectiveness. This is because these systems require such decisions on strengths and structure in order to verify, control, and manage the authorizations data inputs and changes from higher management, the field, and other sources.

Although the TAADS is not directly involved in programming system operations, it is an important source of current year force and manpower authorizations data inputs through the FDMIS interface with the FAS.^{20, 23}

Separate Programming Paths

Fundamental Differences. The factors involved in the fundamentally different approaches to military and civilian manpower programming in current system operations are summarized in Table D-1. The differing programming factors outlined in Table D-1, together with the nature of the multiple programming classifications and complex program coordination and direction processes, precludes the integrated military and civilian manpower authorizations programming even where the two kinds of manpower are mutually substitutable in the TDA portions of the Army force structure. HQ DA policy in DA Pam 570-4³⁷ does identify these areas of military and civilian commonality in TDA organizations. However, these policies do not appear operable in DA-level program guidance, program development, or budget program formulation.

As mentioned previously the reason for this condition relates to the significantly different ways in which military and civilian manpower are treated. This difference begins in the requirements planning and is projected throughout the program development and program budget formulation phase. The basic aggregation level used for military manpower planning programming in the LFCS, FYDP, and FGC are TOE/TDA units. Thus the FYDP-AMS PE codes for these units used in military manpower programming represent unit aggregations of military manpower spaces. Civilian spaces are related not to overall unit missions on a force structure basis but to the functions and workloads performed by a

Table D-1

SUMMARY OF THE SEPARATE MILITARY AND CIVILIAN PROGRAM PATHS,
CURRENT MANPOWER PROGRAMMING SYSTEM

	Military Manpower Authorizations	Civilian Manpower Authorizations
Programming Basis—	Force structure units and missions (both peace and combat conditions)	Static support and overhead functions and workloads (peace and noncombat conditions only)
Programming Objectives—	Man the maximum combat and combat support units (TOE and essential support units/activities) (TDA)	Supplement or substitute for military manpower in noncombat support and overhead activities (fixed installations and HQ)
Program Classification Systems in Order of Importance—	1-LFCS; 2-FYDP; ^a 3-OSD FGC; 4-AMS appropriations and programs	1-AMS appropriations and programs; 2-FYDP; ^a 3-OSD FGC; (LFCS not applicable)
Authorizations Basis—	Aggregated spaces derived from force structure TOE/TDAs, converted to MPA TOA	TOA converted to aggregated spaces for functional workloads relative to AMS appropriations and programs
Manpower Authorizations Funding—	MPA appropriation— Active Army; Reserve appropriations—USAR and ARNG (Inactive)	OMA (Principal), FEMA, MCA, RDTE, Reserve appropriations budget programs and subprograms
Manpower Authorization Entities—	Officers, warrant officers, enlisted	US and foreign national direct and indirect hire by salary classifications (graded, wage board) with geographic differences
Programmed Manpower Distribution—	By LFCS categories and force packages to major commands and agencies	By AMS budget program and subprogram functions to major commands and agencies
Principal Manpower Program Data Sources—	ACSFOR FAS files and troop lists; FYDP military manpower file (MANEX)	ACSFOR workload factors (AMS); civilian compensation factors; FYDP civilian manpower file (MANEX)

^a The FYDP program classifications and program element structure are the principal means used for comparison of military and civilian authorizations and allocations.

variety of civilian classifications relative to the dollars that might be available for civilian hiring from the various functional AMS budget programs. Thus, from the outset, development of civilian manpower authorizations programming appears to be strongly influenced by the same factors and procedures by which the individual civilian employee in the current work force is justified, hired, assigned, administered, and paid at the local level. Put another way, the abstract distinction between civilian manpower (spaces) and civilian personnel (faces) in programming seems much less distinct than between military manpower and military personnel. As a result, under current procedures civilian authorizations programming must deal with literally thousands of workload-based individual authorizations aggregated by functional descriptions associated with AMS-FYDP programs and stratified by Civil Service and other classifications, with no unit or force structure association. This cost-based functional orientation of civilian manpower authorizations makes civilian manpower programs much more difficult to modify and adjust during programming, as compared with military manpower. With active military manpower costs carried in a single MPA budget appropriation -- separately from force structure unit costs -- considerable flexibility obtains in military manpower reprogramming, so long as LFCS category and total military end strengths are observed. This contrast with civilian manpower tends to cause military manpower authorizations to be regarded as "cost free" resources in programming activities.

Lack of Military and Civilian Manpower Visibility. Because of the disassociation of military and civilian manpower -- both in planning and subsequent programming operations -- the separate programming paths do not produce information with the essential degree of visibility of programmed military and civilian manpower as the basis for analysis of allocations and tradeoff decisions. This deficiency prevails both in MFD programming operations as well as at higher DA management echelons. Despite the detail encompassed by the DOD-DA program classifications and controls (i.e., FYDP, OSD FGC, and AMS Appropriations), these classifications tend to obscure rather than clarify military and civilian manpower authorizations relations. Military and civilian manpower

authorizations data and information (spaces and/or costs) summarized in these various fiscal program classifications do not provide an effective means of reflecting the visible mix and balance of military and civilian authorizations and costs, relative to Army force structure, missions, and deployments in meaningful terms for internal ACSFOR or DA management needs. The emphasis on the FYDP structure as a central reference for attempting to compare and evaluate military and civilian manpower allocations -- either in program summary or PE detail -- appears to be largely invalid owing to the widely differing bases and methods by which military and civilian manpower data in PEs are developed in the separate manpower programming paths. Between this complex mass of differing PE content detail and the unrelatable program information summaries, the Army command structure of commands and agencies is used to display and compare military and civilian manpower programmed allocations. In view of the force structure derivation of military manpower and the budget-based development of civilian manpower, it is questionable whether this summary approach provides any level of DA management or staff with the necessary insights as to the rationality of these military and civilian allocations relative to command missions or the Army as a whole.

An important related effect is that force structure and associated military manpower development takes precedence over and is subject to earlier decision than civilian manpower. This creates a built-in "lag" effect in civilian manpower programming operations. This would appear to make logical tradeoffs between military and civilian manpower difficult to achieve.

Tradeoff Problem. The worldwide allocations of military manpower are shaped from the outset by force planning objectives (e.g., AFDP-I) and high-level DA management decisions concerning the major Army forces deemed necessary in the light of Army strategic responsibilities, missions and probable institutional considerations. Following the reallocation of OSD fiscal constraints by Secretariat-CSA levels (App C), these factors appear to "fix" fairly early the overall constrained military manpower program parameters for the budget year, with a related "locking in" of MPA TOAs for the budget submission. As mentioned earlier, consideration of civilian manpower begins much later in the

annual cycle. Civilian allocations appear to be more heavily weighted by policy judgments relative to "floors" and "ceilings" established for various appropriations programs by DA management. The crux of this matter seems to lie in the difficulty in shifting or reprogramming MPA TCAs to other appropriations programs, or vice versa. This is because any change in MPA has the effect of changing military manpower end strengths, the maintenance of which is the logical and principal aim of HQ DA.

Manual Programming Procedures vs Automated Capabilities

Manual Procedures Problem. During the IMP-I interviews and analysis of system operations, it became evident that much of the data processing involved in manpower data computations, projections, translations between program classification structures, and information summarization relied extensively on manual clerical procedures throughout current programming system operations.

A variety of automated manpower data printouts is produced by USAMSSA, as well as force program troop lists -- principally from the FAS and MANEX files.²⁶ However, during manpower programming the manipulation, projection, and updating of these data in the various program classifications appeared to depend largely on handwritten spread sheets and coding forms, desk calculators, and adding machines, with final output by typewriter and office reproduction machine. With this there is an accompanying practice of the various program offices to maintain manually extensive sets of data books and programming factors.

The resultant staff and clerical workloads in QACSFOR-MFD programming activities appeared formidable, particularly when program and budget changes and decisions must be analyzed rapidly and data recomputed, extrapolated, and coordinated, all under the usual tight deadlines prevailing in current system operations.

The volume and level of detail involved in these manual procedures presents significant possibilities for errors, data discrepancies, and inconsistencies. In view of the time-consuming aspects of reviewing and checking computational results, it is further possible for these deficiencies to be carried forward in the manually summarized manpower program information that may be the basis of higher DA management

decisions. Inadequate data discipline and control, data redundancy, and data element inconsistency result from extensive reliance on manual programming procedures.

Illustrative of these manual procedures were the detailed calculations made by PDCP in arriving at the civilian manpower TOA and space allocations. These allocations were computed by AMS budget programs and subprograms for currently about 131 AMS-FYDP PE codes, based on the various civilian manpower categories and salary classifications, then distributed to commands and agencies. This extensive computational operation was reiterated at various points in the POM program development and budget formulation phases as the result of required program coordination with program and subprogram directors, management reviews, and other changes affecting civilian program content.

Military manpower programs were also manually derived, based on force program troop lists. An example was the preparation of the "exploded" LFCS, which displayed for each LFCS category and FPLAN code all military manpower spaces, worldwide. This was done for each command and agency for each of the more than currently about 173 AMS-FYDP program elements associated with the TOE/TDA units in the budget year force programs.

The recurring updates of the military and civilian manpower annexes of the FYDP³⁶ and PBG¹⁸ were also prepared manually by PDD branches and furnished to COA in hard-copy form. The PDD input to the FYDP manpower annexes are subsequently reduced to automated files at the Finance and Comptroller Information Systems Command (FINCISCOM), the COA computer facility.

A lack of confidence in automated data was found to justify the various manual bookkeeping operations within PDD manpower programming activities. This view also appeared to underlie the extensive reliance on manual programming procedures, coupled with inferences of untimely response from automated systems and purported costliness of computer operations relative to manual methods.

Also evident in IMP-I interviews and discussions was lack of knowledge and understanding and various biases with regard to automated system capabilities for program analysis and development, existing FDMIS

computer program libraries and user-computer input-output relations. In general, it was found that little appreciation existed at programming activity levels for the potential and uses of computer systems as high-capacity extremely fast computational, programming, and analytical tools. A frequently expressed view was that much "expert judgment" by staff analysts is required to develop manpower authorization programs, and that automated systems and methods make application of such judgment more difficult and time-consuming than manual procedures. Also noted were widely different views and corresponding lack of acceptance of the importance of a consistent manpower data base and consistent data element content in those programs where military and civilian manpower have commonality or substitutability. In the main this condition reflected the different approaches to military and civilian manpower relations engendered by traditionally different practices and current policies reflected in current system operations.

Automated Capabilities and Systems Management. OACSFOR is supported by a powerful third-generation computer system operated and maintained by USAMSSA. Such systems are characterized by high-speed multiple processing, extensive mass data storage, flexible peripheral processing, and random access data retrieval. The latter capability includes remote devices affording direct access to automated files. Such remote devices can provide for both data input and selective output from computer mass storage.

The ACSFOR FDMIS systems maintained by USAMSSA are an extensive complex of computer programs, automated files, and data elements relevant to force and manpower authorizations and other planning and programming data.

The purposes, uses, and general data element specifications of the FDMIS subsystems are outlined in CSR 18-11.²⁰ Of the latter, the FAS is the major subsystem spanning all time phases of the PPBS cycle with regard to force structure units and both military and civilian manpower data related to units of the force structure.

In consonance with DA management information systems policy, the FDMIS as a whole is under the technical supervision and management direction of the ACSFOR Information Data Systems Office (IDSO), reporting

directly to the Deputy ACSFOR. This is in order to obtain the most efficient and economical use of FDMIS capabilities and applications in support of all ACSFOR operations and authorizations data requirements of other Army Staff functional agencies (e.g., DCSPER for military manpower authorizations, DCSLOG for equipment authorizations). CSR 18-11 also designates OACSFOR system managers for each of the FDMIS subsystems. These system managers are staff divisions of and act for the ACSFOR directorate that is the prime user of the particular subsystem; e.g., MF-FA is system manager for the FAS.

In addition to management and coordination of FDMIS subsystem support for their respective directorates, system managers are also required to coordinate with the IDSO and other system managers.

The system management concept prescribed for the FDMIS is a theoretically sound application of functional management principles for computerized systems support of a large diversified organization such as OACSFOR. By centralizing subsystem management at the prime user directorate level, a user-oriented source of system expertise should be available to support and to participate in the functional activities of the other organizational elements as first-level users. This should include advising on, coordinating, and exploiting the full range of the automated capabilities and data content of the subsystem concerned. In practice the system manager should be a principal catalyst in a close user-system relation founded on mutual mission-oriented responsibilities of their parent directorate. Such a relation works to the advantage of both staff users and systems in terms of increased efficiency and improved outputs in support of higher management echelons. The elements of an effective user-system relation are a mix of internal organizational policy, informal two-way communications, attitudinal flexibility, and close cooperation.

Extensive use is made of automated FAS capabilities for force analysis and computational work during force development planning and force program (task list) development. The impetus for this use stems from the DA implementation of the key recommendations of the PRIMAR II Study Project 3-2.^{1, 21} As indicated by the discussion of manual programming procedures above, however, the utilization of the FAS and

computer support capabilities did not seem to prevail to a comparable degree in manpower authorizations programming, even for military manpower. This may be indicative of the need for an internal review within ACSFOR IDSO and MFD with regard to strengthening FAS-user relations and improving the uses of USAMSSA automated capabilities apropos of MFD manpower programming activities and procedures.

For example, the CSFOR-78 Report, required by AR 1-46³⁰ is submitted to CRA by all commands and agencies principally in automated form. However, the reported data is not filed and maintained in automated form at DA for ready retrieval and use. This system has been in existence under OACSFOR cognizance since at least December 1966. The empirical military civilian functional workload data and civilian cost data generated by the CSFOR-78 reporting system is of considerable importance in PDD manpower program development and analysis as a current source of actual and historical workload factors for support manpower programming. A capability for automated storage, selective retrieval, and computer manipulation of CSFOR-78 data in conjunction with FAS manpower data in a computerized manpower analytical modeling system would be a major requirement in a streamlined integrated manpower programming system. In current system operations what should be a readily available and responsive source of important manpower programming factors was evidently neither fully exploited nor adequately integrated into MFD manpower programming procedures as an adjunct of the FAS.

The quarterly MVs prepared by CRA are a tool of current year manpower authorization control that affect the budget year programs. The MV records and confirms directed and unprogrammed manpower actions normally effected by letter or TWX between issues of the PBG military and civilian manpower annexes prepared by PDD branches. Some 235 MVs are manually prepared, collated, and coordinated each quarter for worldwide distribution to commands and agencies. However, the military and civilian authorizations changes effected by MVs are not direct inputs into either TAADS or FAS files. These changes come back to HQ DA and the FDMIS through TAADS submissions by commands. Thus a time lag is created in current year manpower authorizations data in TAADS-FAS files. Owing to the update relations between the time-phased FAS files²⁶ and

updating of the budget year manpower authorizations, data in the automated phase are also affected.

To summarize, the existing problems in the interfaces between manpower programming procedures and FDMIS automated system support indicated in the foregoing reflect a significant lack of organizational synergism. This condition may be a major obstacle to increased efficiency of programming system operations.

CONCLUSION

The nature and application of the controls and constraints (App C) and the current manpower programming system operations analyzed and evaluated in App D indicate certain major areas that should be addressed to attain integrated manpower programming. These are concluded to be the following:

1. Within the prescribed multiple program classification systems to which the Army must respond, a unified DA program classification method with compatible and comparable data elements for Army military and civilian manpower is necessary. This classification structure should portray in visible and meaningful ways the program mix and relation of military and civilian manpower in aggregations ranging from PE detail up to high-level information summaries.
2. Directly related to conclusion 1 above, a common data base, with consistent data element content and coding structure for military and civilian manpower programming is a major requirement. This implies improved input-output data control and translation to all required program classification structures within manpower programming operations.
3. Attainment of conclusions 1 and 2 above will depend on improved interfaces between manpower programming organizations, staff procedures, data sources, and existing automated systems capabilities for greater programming efficiency and staff responsiveness to management needs within OACSFOR and high DA management echelons.
4. Increased flexibility in manpower program development and recycling will require development and use of integrated computer-assisted analytical techniques in all phases of military and civilian manpower activity, from requirements planning through program development

and program and budget formulation. This is necessary to eliminate time-consuming procedures, reduce staff workloads, and make programming operations more useful to DA management and decision making.

Appendix E

FDMIS MANPOWER DATA COMPARISONS AND ILLUSTRATIVE IMP OUTPUT DISPLAYS

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FDMIS MANPOWER DATA COMPARISONS

During the course of the IMP study, analysis was devoted to several aspects of current Force Development Management Information System's (FDMIS) manpower data relations and computer processing capabilities that affect the production of comparative output displays of military and civilian manpower.

A Force Accounting Terminal System (FACTS) extract from the Force Accounting System (FAS) for 13 sample table of distribution and allowances (TDA) units (specific TDA units are identified in Table E-1) was provided by Force Accounting Division, Manpower and Forces Directorate (MFD) (MF-FA). Although the FACTS extract was limited to 13 TDA units representing a relatively insignificant sample of total Army TDA units, an attempt was made to gain the widest possible range of geographically distributed and functionally disparate units. The purpose of the data analysis was to determine if unit level authorization data could be tracked using Program Element Code (PEC), Command Code (CMD), and unit number (UNMBR) identifiers between the FACTS retrieval and the detailed military and civilian manpower annexes currently used by MFD-PD (Program Development) manpower programmers. Results of the data match are shown in Table E-2 and warrant several tentative conclusions.

— From the limited sample of TDA units examined, the possibility of matching civilian and military authorizations by CMD code and UNMBR appears promising. Once a PE match is achieved, CMD code and UNMBR match up on a one-for-one basis. The exceptions to this can be accounted for by all-military or all-civilian TDA units.

— Several PEs [22312A - Major Depot Activity (USAREUR), 23196A Area Support Activity (USAREUR), 72898A - HQ Commodity Command (USARADCOM),

Table E-1

PROGRAMMING CODE PARAMETERS FOR SELECTION OF SAMPLE TDA UNITS
AND ANALYSIS OF MILITARY AND CIVILIAN DATA CONTENT

Geographic Area and Major Cmd.	FYDP PE Identity for Sample TDA Selections	LFCS FPlan	OSD FGC	AMS OMA Program Ident.	Type TD for Data Analysis
Europe	23198A -Command	ANE	3L	203198.00000	HQ USAREUR
USAREUR-E1	22311A -Field Army Support	ANE	3B	202311.00000-.30000	Army and Corps Support Activity
	22312A -Theater Army Support	ANE	3B	203212.00000-.20000	Major Depot Activity
	23196A -Base Operations	ANE	4L	203196.Z0000*	Area Support Activity
CONUS	12898A -Command	BAC	3L	102898.00000	Regional (Bde) HQ
USARADCOM-AD	12896A - Base Operations	BAC	4L	102896.Z0000*	Support Installation
CONUS	72898A -Command	CLC	3L	72898.00000-.20000	HQ Commodity Command
USAMC-M1	72111A -Supply Depots/Opns	CLC	3M	721111.00000-.94000	Commodity Depot
	72207A -Depot Maint. Activ.	CLC	3M	732207.00000-.A-20000	Depot Maint. Facility
	72896A -Base Operations	CLC	4L	732896.Z0000*	Class II Installation
CONUS	91114A -Command	CSC	3L	951114.00000-.40000	HQ CONUS Army
USCONARC-CA	81111A -Training	CTC	3K	811111.00000-.27000	USATC
	81211A -Hospitals	CSC	4M	841211.00000-.20000	Army Hospital (Post)

Table E-2

PEC-CMD-UNMBR MATCH BETWEEN FAS-FACTS EXTRACT, MILITARY
MANPOWER ANNEX, AND CIVILIAN MANPOWER ANNEX

UNMBR	FACTS Extract	Military Manpower Annex	Civilian Manpower Annex
1. <u>23198A HQ USAREUR</u>			
WOAN	+	+	+
WOBX	+	+	+
W1AU	0	+	+
W1LU	+	+	+
W2BZ	+	+	+
W2BØ	+	+	+
W2B1	+	+	+
W2B3	+	+	+
W2B5	+	+	+
W2B6	+	+	+
W2B7	+	+	+
W2B8	+	+	+
W2B9	+	+	+
W2CB	+	+	+
W2CC	+	+	+
2. <u>22311A Army and Corps Support Activity</u>			
Command Program	0	+	+
W1EM	0	+	+
3. <u>22312A Major Depot Activity</u> - PE did not appear in extract			
Command Program	NA	+	+
WOAP	NA	+	+
WOA9	NA	+	+
WOBØ	NA	+	+
WODM	NA	+	+
WCGH	NA	+	+
W1YB	NA	+	+
W230	NA	+	+
W266	NA	+	+
P001	NA	+	0
W1PX	NA	0	+
W27C	NA	0	+

UNMBR	FACTS extract	Military Manpower Annex	Civilian Manpower Annex
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4. 23196A Area Support Activity - PE did not appear in extract

WOB5	NA	+	+
W06B	NA	+	+
W077	NA	0	+
W1EH	NA	+	+

5. 12898A Regional (Bde) HQS

Command Program	0	+	+
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6. 12896A Support Installation

PE appeared in annexes, but no USARADCOM code for either military or civilian

7. 72898A HQ Commodity Command - PE did not appear in extract

Command Program	NA	+	0
WOJ2	NA	+	+
WOJO	NA	+	+
WOJ1	NA	+	+
WOKR	NA	+	+
W11L	NA	+	+
W2GB	NA	+	+
W2GJ	NA	+	+
W215	NA	+	+
WOKZ	NA	0	+
W149	NA	0	+
W2S5	NA	0	+

8. 72111A Commodity Depot

PE did not appear in any of the three sources.

9. 72207A Depot Maintenance Facility

Command Program	0	+	+
WOZB	+	+	+
W2GN	+	+	0
WOL3	+	0	+
WOM3	+	0	+
WOY9	+	0	+

UNMBR	FACTS extract	Military Manpower Annex	Civilian Manpower Annex
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10. 72896A Class II Installation - PE did not appear in extract

Command Program	NA	+	+
WOL3	NA	+	+
WOMN	NA	+	+
WOWP	NA	+	+
WOZB	NA	0	+
WOY9	NA	0	+
W22D	NA	0	+

11. 91114A HQ CONUS Army

Command Program	0	+	+
WOGS	+	+	+
W17F	0	+	+
W17G	+	+	+
W17H	+	+	+
W2MB	0	0	+

12. 81111A USATC

Command Program	0	+	+
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13. 81211A Army Hospital (Post)

Command Program	0	+	+
-----------------	---	---	---

Legend:

+ = Manpower authorizations shown for unit number within PE.
0 = Manpower authorizations not shown for unit number within PE.
NA = Manpower authorizations not shown because PE not available.

72111A - Commodity Depot (USAMC), and 72896A - Class II Installation (USAMC)] were not picked up in the FACTS extract. In one case the wrong FE was entered (71111A instead of 72111A) and in another (23196A) the user-supplied Force Plan criteria were not met. The high incidence of FACTS nonmatches at FEC (UNPEC) level would be unacceptable for both detailed manpower programming applications and FE, Command, and Force Plan Summary displays, particularly so in the summary displays where individual program element and unit number omissions would likely pass undetected. To prevent such an occurrence greater system safeguards are necessary, which should include printouts of unmatched queries and the sort sequence and compilation method used to aggregate manpower totals for summary displays.

— The remaining mismatches can be accounted for and are not the result of data inconsistencies between the FACTS extract and the civilian and military manpower annexes. A number of mismatches resulted from Command Program summaries not being carried in the extract. In addition, two of the FEs (81111A - Training Centers and 81211A - Post Hospitals) were only traced to Command Program summary. A more detailed breakout of these two FEs could have been made had Army area codes been used instead of the USACONARC code.

ILLUSTRATIVE IMP OUTPUT DISPLAYS

The following descriptions of the attached IMP display formats consider pertinent data characteristics, relations between the displays in the data hierarchy, and the application of the displays to the processes occurring during the program development and program and budget formulation phases. These displays could be generated using the system logic shown in Fig. 4-7.

Detailed Manpower Data Displays

This level of output formats features basic unit and function data suitable for detailed staff analyses and backup for more aggregated operational and management displays featuring LFCS, FYDP, FCC, and AMS classifications of the force structure and corresponding military and civilian manpower spaces and total obligational authority (TOA).

Display A1 corresponds to two data printouts currently being produced from the Manpower Annex Data (MANEX) file. It is intended as a

standardized military and civilian manpower annex that would utilize existing FAS-MANEX data elements. Such a display would serve as a working document for use in preparing manpower space adjustments at a PE level and as a detailed supporting document for operation- and management-level displays featuring aggregations and restructuring of PE data. (This would include displays B1-B6, C1, C4, and C5.)

An additional detailed format, Display A2, provides sub-PE detail (subunits below PEC level) for military and civilian manpower. Data summarization would be by unit PEC and budget function (sub-PEC) showing military and civilian aggregate spaces and TOA. Encompassing only support manpower, this display accounts for the approximately 300 unit identification codes (UICs) with more than one PE associated with them and would provide the detailed data necessary for program and budget analysis and backup to more aggregate manpower space and cost displays (Displays B4-B10 and C2-C5).

Operational Displays

These displays would be appropriate for less detailed staff analysis and also serve as a medium for coordination between MFD-PD program analysts and Program-Subprogram-PE Directors during civilian and military manpower program development. Manpower spaces and TOAs could be examined by PEs and commands in terms of the LFCS, FYDP, FCC, and AMS structures.

At present a significant percentage of manpower spaces (particularly civilian) are carried on the MANEX files as undistributed spaces in individual PE command programs; these spaces, whether undistributed or distributed as programming assumptions, are accounted for in Displays B1 and B2 with PE and command totals.

The remaining operational and management displays combine distributed and undistributed spaces in their manpower space and TOA totals. Several formats (Displays B4-B6) would be ideally suited for conferences between program analysts and affected Program Directors. With the addition of a look-up table, individual reports could be prepared for affected Program-Subprogram-PE Directors. Additional operating-level reports would provide further intermediate breakouts of military and civilian and mission and support manpower aggregations.

Management Displays

These formats provide a summarization of force structure and manpower program composition using the LFCS, FYDP, FGC, and AMS classification systems, and might serve as enclosures for principal DA-produced documents as the Army Force Development Plan (AFDP), the DA response to the Tentative Fiscal Guidance Memorandum, POM, and manpower inputs to budget formulation.

Display C1 represents the highest level of aggregation indicating major FYDP programs with space totals shown for each of eight military and civilian manpower categories within major FYDP programs. These totals, which are summarizations of data provided in Displays A1 and B8, could be incorporated as an enclosure to the AFDP.

Displays C2 and C3 are envisioned as the basic integrated displays of military and civilian manpower in a force structure relation. Manpower totals are presented in terms of mission program (TOE military) and support program (TDA military and civilian). These formats would be appropriate for AFDP purposes and POM program allocations reviews and guidance. Supplementing these formats, Display C4 enables military support manpower to be associated with civilian manpower on an AMS budget program (functional) basis. Data displayed is a roll-up of budget program military and civilian space and TOE PE aggregates from Display B6.

MILITARY AND CIVILIAN MANPOWER - PE DETAIL

UNPEC		AMSCO		PE DESCRIPTOR												
NNNNNA		NNNNNNNNNN		AAAAAAAAAAAAAAAAAAAAA												
<hr/>																
TPSN	EL	SEQ	UNR	UIC	UNIT	DESIG	COMD	OP	FPLAN	CTRL	ID	FY	FY	FY	FY	FY
NNNN	N		XXXX	XXXXXX	AAAAA	AAAAA	XX	NNN	AAA	AA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN
											EWL	NNNN	NNNN	NNNN	NNNN	NNNN
											MAGR	NNNN	NNNN	NNNN	NNNN	NNNN
											DUS	NNNN	NNNN	NNNN	NNNN	NNNN
											DFN	NNNN	NNNN	NNNN	NNNN	NNNN
											DAGR	NNNN	NNNN	NNNN	NNNN	NNNN
											IFN	NNNN	NNNN	NNNN	NNNN	NNNN
											CAGR	NNNN	NNNN	NNNN	NNNN	NNNN

Display A1

MILITARY AND CIVILIAN TD MANPOWER - UNIT AND FUNCTION DETAIL

UIC	UNIT DESIGNATION	COMD CODE	OP AGY	FPLAN	MIL CTRL
XXXXXX	AAAAAAAAAAA	XX	NNN	AAA	AA

UNPEC	PE DESCRIPTOR	ID	FY	FY	FY	FY	FY
NNNNNA	AAAAAAAAAAA	MACR	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN
		CAGR	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN

MILITARY AND CIVILIAN MANPOWER - COMMAND PROGRAM SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR
NNNNNA	NNNNNNNN	AAAAAAAAAAAAAAAAAAAA

COMD CODE	ID	FY	FY	FY	FY	FY
AA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN
	ENL	NNNN	NNNN	NNNN	NNNN	NNNN
	MAGR	NNNN	NNNN	NNNN	NNNN	NNNN
	DUS	NNNN	NNNN	NNNN	NNNN	NNNN
	DFN	NNNN	NNNN	NNNN	NNNN	NNNN
	DAGR	NNNN	NNNN	NNNN	NNNN	NNNN
	IFN	NNNN	NNNN	NNNN	NNNN	NNNN
	CAGR	NNNN	NNNN	NNNN	NNNN	NNNN

MILITARY AND CIVILIAN MANPOWER - PE COMMAND SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR						
NNNNNA	NNNNNNNN	AAAAAAAAAAAAAAAAAAAA						
COMD CODE	ID	FY	FY	FY	FY	FY	FY	FY
AA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	EHL	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	MAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	DUS	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	DEF	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	DAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	IFU	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
	CAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN

MILITARY AND CIVILIAN MANPOWER - PE FORCE PLAN SPACE SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR
NNNNNA	NNNNNNNNN	AAAAAAAAAAAAAAAAAAAA

E-14

FPLAN	MIL CTRL	ID	FY	FY	FY	FY	FY
AAA	AA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN
		ENL	NNNN	NNNN	NNNN	NNNN	NNNN
		MAGR	NNNN	NNNN	NNNN	NNNN	NNNN
		DUS	NNNN	NNNN	NNNN	NNNN	NNNN
		DEF	NNNN	NNNN	NNNN	NNNN	NNNN
		DAGR	NNNN	NNNN	NNNN	NNNN	NNNN
		IFN	NNNN	NNNN	NNNN	NNNN	NNNN
		CAGR	NNNN	NNNN	NNNN	NNNN	NNNN

Display B3

MILITARY AND CIVILIAN TD MANPOWER - COMMAND SPACE AND COST SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR	FGC	FGC DESCRIPTOR	PROG DIRECTOR	S.PROG DIRECTOR	PE DIRECTOR
NNNNNA	NNNNNNNNNN	AAAAAAAAAAAAAAAAAAAA	NA	AAAAAAAAAAAA	AAAAAA	AAAAAA	AAAAAA

COMD CODE	OP AGY	ID	FY	FY	FY	FY	FY	FY
AA	NNN	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		ENL	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		MAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN
		DUS	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		DEF	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		DAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		LEN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		CAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN



MILITARY AND CIVILIAN TD MANPOWER - PE FORCE PLAN SPACE AND COST SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR	FGC	FGC DESCRIPTOR	PROG DIRECTOR	S.PROG DIRECTOR	PE DIRECTOR
NNNNNA	NNNNNNNNNN	AAAAAAAAAAAAAAAAAAAA	NA	AAAAAAAAAAAA	AAAAAA	AAAAAA	AAAAAA

E-16

FPLAN	MIL CTRL	ID	FY	FY	FY	FY	FY	FY
AAA	AA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		ENL	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		MAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN
		DUS	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		DEF	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		DAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		IFN	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		CAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
		TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN

Display B5

MILITARY AND CIVILLIAN TD MANPOWER - PE SPACE AND COST SUMMARY

UNPEC	AMSCO	PE DESCRIPTOR	FGC	PE DESCRIPTOR	PROG DIRECTOR	S. PROG DIRECTOR	PE DIRECTOR
NNNNNA	NNNNNNNNNN	AAAAAAAAAAAAAAAAAAAA	NA	AAAAAAAAAAAA	AAAAAA	AAAAAA	AAAAAA

ID	FY	FY	FY	FY	FY	FY
NAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN
CAGR	NNNN	NNNN	NNNN	NNNN	NNNN	NNNN
TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN





MILITARY AND CIVILIAN MANPOWER - FORCE PLAN TOA BY COMMAND

COMD
CODE
XX

FPLAN	ID	FY	FY	FY	FY	FY
AAA	MAGR TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN
	CAGR TOA	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN	\$NNNNNN

MILITARY AND CIVILIAN TD MANPOWER - APPROPRIATION AND BUDGET PROGRAM
SPACE AND COST SUMMARY BY COMMAND

COND
CODE
XX

END FY **

Support Program

APPROPRIATIONS*

SPACES

TOA

	TD MIL	TD CIV	TD MIL	TD CIV
MILITARY PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
OPERATIONS AND MAINTENANCE, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
STRATEGIC FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
GENERAL PURPOSE FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
INTELLIGENCE AND COMMUNICATIONS	NNNN	NNNN	\$NNNNNN	\$NNNNNN
AIRLIFT - SEALIFT	NNNN	NNNN	\$NNNNNN	\$NNNNNN
GUARD AND RESERVE FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
CENTRAL SUPPLY AND MAINT.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
TRUP., MED., & OTHER GEN. PERS. ACTS.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
ADMIN AND ASSOC. ACTS.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
SUPPORT OF OTHER NATIONS	NNNN	NNNN	\$NNNNNN	\$NNNNNN
PROCUREMENT OF EQUIP. AND MISC., ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
RESEARCH, DEVEL., TEST, & EVAL., ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
NATIONAL GUARD PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
OPERATIONS & MAINTENANCE, ARNG	NNNN	NNNN	\$NNNNNN	\$NNNNNN
RESERVE PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, ARNG	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, AR	NNNN	NNNN	\$NNNNNN	\$NNNNNN

*Would also include pertinent subprograms.
**Option to display remaining five outyears.

MILITARY AND CIVILIAN MANPOWER - FISCAL GUIDANCE SPACE AND COST SUMMARY BY COMMAND

COMD
CODE
AA

FISCAL GUIDANCE CATEGORIES	END FY *		MISSION PROGRAM				SUPPORT PROGRAM			
			TO MIL		TD MIL		TOA		TD CIV	
	SPACES	TOA	SPACES	TOA	SPACES	TOA	SPACES	TOA	SPACES	TOA
MAJOR MISSIONS (AGGREGATE)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
STRATEGIC FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
LAND FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
MOBILITY FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
OTHER MISSIONS (AGGREGATE)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
INTELLIGENCE & SECURITY (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
COMMUNICATIONS (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
RESEARCH & DEVELOPMENT (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
SUPPORT OF OTHER NATIONS (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
GENERAL SUPPORT (AGGREGATE)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
BASES & INDIVIDUAL SUPPORT (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
BASES & INDIVIDUAL SUPPORT (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
TRAINING (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
COMMAND (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN
LOGISTICS (TOTAL)	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN	NNNN	\$NNNNNN

*Option to display remaining five outyears.

Display B10

MILITARY AND CIVILIAN MANPOWER - MAJOR FYDP PROGRAM SUMMARY

MAJOR FYDP PROGRAM	PROGRAM DESCRIPTOR	ID	FY	FY	FY	FY	FY
N	AAAAAAAAAAAAAAAAAAAA	O/WO	NNNN	NNNN	NNNN	NNNN	NNNN
		ENL	NNNN	NNNN	NNNN	NNNN	NNNN
		MAGR	NNNN	NNNN	NNNN	NNNN	NNNN
		DUS	NNNN	NNNN	NNNN	NNNN	NNNN
		DFN	NNNN	NNNN	NNNN	NNNN	NNNN
		DAGR	NNNN	NNNN	NNNN	NNNN	NNNN
		IFN	NNNN	NNNN	NNNN	NNNN	NNNN
		CAGR	NNNN	NNNN	NNNN	NNNN	NNNN

Display C1

MILITARY AND CIVILIAN MANPOWER - FORCE PACKAGE SPACE SUMMARY

END FY__*

FPLAN	FORCE PACKAGE TITLE	MISSION PROGRAM TO MIL	SUPPORT PROGRAM TD MIL	PROGRAM TD CIV
A	DIV. FORCES (AGGREGATE)	NNNN	NNNN	NNNN
AN	NATO FORCE (TOTAL)	NNNN	NNNN	NNNN
ANE	EUROPE FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
ANG	NATO RES. FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
AP	PACIFIC FORCE (TOTAL)	NNNN	NNNN	NNNN
APK	KOREA (SUBTOTAL)	NNNN	NNNN	NNNN
APS	SEASIA FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
APX	PACIFIC RES. FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
AZ	OTHER THEATER FORCE (TOTAL)	NNNN	NNNN	NNNN
AZX	OTHER DEPLOYED FORCES (TOTAL)	NNNN	NNNN	NNNN
AZC	OTHER THEATER RES. FORCES (TOTAL)	NNNN	NNNN	NNNN
AVC	ACTIVE STRAT. RES. FORCE (TOTAL)	NNNN	NNNN	NNNN
B	SPL. MSN. FORCES (AGGREGATE)	NNNN	NNNN	NNNN
BAK	CONUS AIR/MSL DEF. (TOTAL)	NNNN	NNNN	NNNN
BD	DEFENSE FORCES (TOTAL)	NNNN	NNNN	NNNN
BDA	ALASKA (SUBTOTAL)	NNNN	NNNN	NNNN
BDP	PANAMA (SUBTOTAL)	NNNN	NNNN	NNNN
BDB	BERLIN (SUBTOTAL)	NNNN	NNNN	NNNN
BDI	ICELAND (SUBTOTAL)	NNNN	NNNN	NNNN
BDD	CARIBBEAN (SUBTOTAL)	NNNN	NNNN	NNNN
BM	MISSILE FORCES (TOTAL)	NNNN	NNNN	NNNN
BME	NATO MSL. FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
BMX	PAC. MSL. FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
BMC	CONUS MSL. FORCE (SUBTOTAL)	NNNN	NNNN	NNNN
BIX	STRAT. INTELL. & SEC. (TOTAL)	NNNN	NNNN	NNNN
BGX	STRAT. COMMUNICATIONS (TOTAL)	NNNN	NNNN	NNNN
BJX	DOD/JT ACTIVITIES (TOTAL)	NNNN	NNNN	NNNN
BGX	OTHER SVC. SUPPORT (TOTAL)	NNNN	NNNN	NNNN
BFX	FREE WORLD SPT. (TOTAL)	NNNN	NNNN	NNNN
C	GENERAL SPT. FORCES (AGGREGATE)	NNNN	NNNN	NNNN
CTX	TRAINING ESTAB. (TOTAL)	NNNN	NNNN	NNNN
CSX	SUPPORT ESTAB. (TOTAL)	NNNN	NNNN	NNNN
CLX	LOGISTIC ESTAB. (TOTAL)	NNNN	NNNN	NNNN
CKX	MMVT. SPT. (TOTAL)	NNNN	NNNN	NNNN
CEX	CMBT. DEVELOPMENT (TOTAL)	NNNN	NNNN	NNNN
CRX	R & D (TOTAL)	NNNN	NNNN	NNNN
CHX	HQX/FLC ACTIV. (TOTAL)	NNNN	NNNN	NNNN
COX	THEATER SUPPORT (TOTAL)	NNNN	NNNN	NNNN
AGGREGATE TOTALS-ALL CATEGORIES		NNNNNN	NNNNNN	NNNNNN
TOTAL MAN YEARS- ALL CATEGORIES		NNNNNN	NNNNNN	NNNNNN
TOTAL MILITARY TRAINED STRENGTH			NNNNNN	
CAT D- TTPS, NONSTRUCTURE			NNNNNN	
TOTAL MILITARY MANPOWER AUTH.			NNNNNN	

*Option to display remaining five outyears

Display C2

MILITARY AND CIVILIAN MANPOWER - FORCE PACKAGE COST SUMMARY

END FY__*

FPLAN	FORCE PACKAGE TITLE	MISSION PROGRAM	SUPPORT PROGRAM	
		TO MIL	TD MIL	TD CIV
A	DIV.FORCES (AGGREGATE)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AN	NATO FORCE (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
ANE	EUROPE FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
ANG	NATO RES. FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AP	PACIFIC FORCE (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
APK	KOREA (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
APS	SEASIA FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
APX	PACIFIC RES. FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AZ	OTHER THEATER FORCE (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AZX	OTHER DEPLOYED FORCES (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AZC	OTHER THEATER RES. FORCES (TOT.)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AVC	ACTIVE STRAT. RES. FORCE (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
B	SPL.MSN.FORCES (AGGREGATE)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BAX	CONUS AIR/MSL DEF. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BD	DEFENSE FORCES (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BDA	ALASKA (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BDP	PANAMA (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BDB	BERLIN (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BDI	ICELAND (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BDD	CARIBBEAN (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BM	MISSILE FORCES (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BME	NATO MSL.FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BMX	PAC.MSL.FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BMC	CONUS MSL.FORCE (SUBTOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BIX	STRAT. INTELL. & SEC. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BGX	STRAT. COMMUNICATIONS (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BJX	DOD/JT ACTIVITIES (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BCX	OTHER SVC SUPPORT (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
BFX	FREE WORLD SPT. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
C	GENERAL SPT.FORCES (AGGREGATE)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CTX	TRAINING ESTAB. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CSX	SUPPORT ESTAB. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CLX	LOGISTIC ESTAB. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CKX	MVMT.SPT. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CEX	CMBT. DEVELOPMENT (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CRX	R & D (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
CHX	HQX/FLC ACTIV. (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
COX	THEATER SUPPORT (TOTAL)	\$NNNNNN	\$NNNNNN	\$NNNNNN
AGGREGATE TOTALS-ALL CATEGORIES		\$NNNNNN	\$NNNNNN	\$NNNNNN

*Option to display remaining five outyears.

Display C3

MILITARY AND CIVILIAN TD MANPOWER - APPROPRIATION AND BUDGET PROGRAM SPACE AND COST SUMMARY

END FY **

Support Program

APPROPRIATIONS*	SPACES			TOA
	TD MIL	TD CIV	TD MIL	TD CIV
MILITARY PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
OPERATIONS AND MAINTENANCE, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
STRATEGIC FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
GENERAL PURPOSE FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
INTELLIGENCE AND COMMUNICATIONS	NNNN	NNNN	\$NNNNNN	\$NNNNNN
AIRLIFT - SEALIFT	NNNN	NNNN	\$NNNNNN	\$NNNNNN
GUARD AND RESERVE FORCES	NNNN	NNNN	\$NNNNNN	\$NNNNNN
CENTRAL SUPPLY AND MAINT.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
TRNG., MED., & OTHER GEN. PERS. ACTS.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
ADMIN AND ASSOC. ACTS.	NNNN	NNNN	\$NNNNNN	\$NNNNNN
SUPPORT OF OTHER NATIONS	NNNN	NNNN	\$NNNNNN	\$NNNNNN
PROCUREMENT OF EQUIP. AND MISC., ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
RESEARCH, DEVEL., TEST, & EVAL., ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
NATIONAL GUARD PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
OPERATIONS & MAINTENANCE, ARNG	NNNN	NNNN	\$NNNNNN	\$NNNNNN
RESERVE PERSONNEL, ARMY	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, ARNG	NNNN	NNNN	\$NNNNNN	\$NNNNNN
MILITARY CONSTRUCTION, AR	NNNN	NNNN	\$NNNNNN	\$NNNNNN

*Would also include pertinent subprograms.

**Option to display remaining five outyears.

Display 34

MILITARY AND CIVILIAN MANPOWER - FISCAL GUIDANCE SPACE AND COST SUMMARY

END FY *

FISCAL GUIDANCE CATEGORIES	MISSION PROGRAM			SUPPORT PROGRAM		
	SPACES	TOA	TD MIL	SPACES	TOA	TD CIV
MAJOR MISSIONS (AGGREGATE)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
STRATEGIC FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
LAND FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
MOBILITY FORCES (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
OTHER MISSIONS (AGGREGATE)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
INTELLIGENCE & SECURITY (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
COMMUNICATIONS (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
RESEARCH & DEVELOPMENT (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
SUPPORT OF OTHER NATIONS (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
GENERAL SUPPORT (AGGREGATE)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
BASES & INDIVIDUAL SUPPORT (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
TRAINING (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
COMMAND (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN
LOGISTICS (TOTAL)	NNNN	\$NNNNNN	NNNN	NNNN	\$NNNNNN	NNNN

*Option to display remaining five outyears.

Display C5

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